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SIXTEENTH ANNUAL REPORT

OF THE

WISCONSIN

Agricultural Experiment Association

WITH SIXTH ANNUAL REPORT OF

ALFALFA ORDER

Address of President, Secretary's Report With Papers and Addresses Given
By Members Of The Association And Others Interested In
Progressive Agriculture.

COMPILED BY

R. A. MOORE, *Secretary*

MADISON, WIS.
DEMOCRAT PRINTING CO., STATE PRINTER
1918

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PRIZE WINNING EXHIBITS OF SHEAF GRAINS AND GRASSES, 1918 GRAIN SHOW

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LETTER OF TRANSMITTAL

WISCONSIN AGRICULTURAL EXPERIMENT ASSOCIATION

MADISON, WIS., 1918.

To His Excellency, EMANUEL L. PHILIPP,
Governor of the State of Wisconsin:

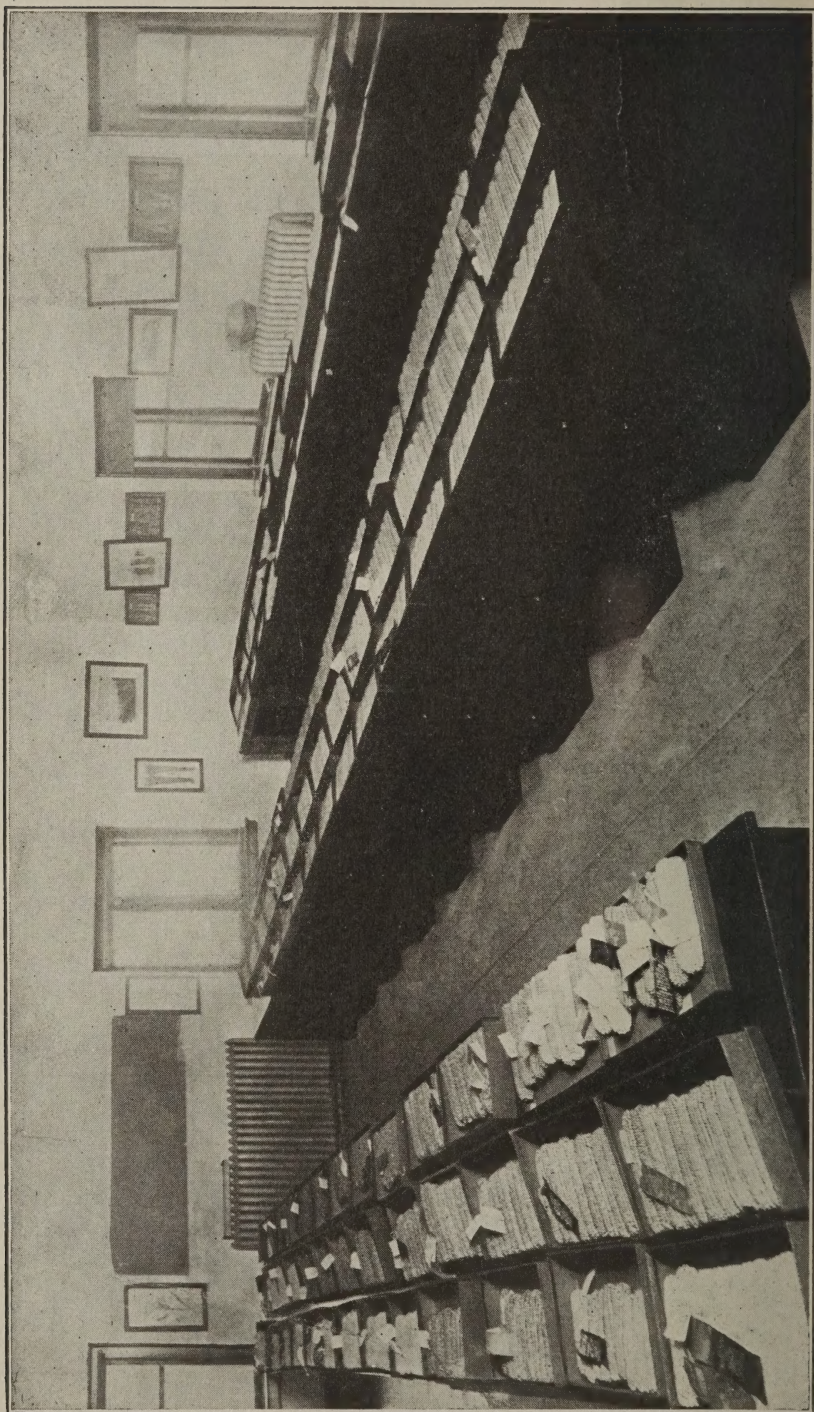
Sir—I have the honor to submit for publication, as provided by law, the Sixteenth Annual Report of the Wisconsin Agricultural Experiment Association, showing the receipts and disbursements the past year, also outlines for experiments, and addresses and discussions given at the annual meeting at Madison, February 7th to 9th, 1918.

Respectfully submitted,

R. A. MOORE,
Secretary.

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PRIZE WINNING EXHIBITS OF CORN, 1918 GRAIN SHOW

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OFFICERS—1918

President.....	FRANK BELL, Columbus
Vice President.....	RUFUS GILLETTE, Verona
Secretary.....	R. A. MOORE, Madison
Asst. to the Sec'y.....	H. W. ALBERTZ, Madison
Treasurer.....	PETER SWARTZ, Waukesha
Clerk and Stenographer.....	CLARA BRABANT, Madison

COMMITTEES

Executive:

GEO. W. DAVIES.....	North Freedom
J. R. THORPE.....	Beloit
A. L. STONE.....	Madison
J. B. CHEESMAN.....	Racine
JESSE VAN NATTA.....	Dodgeville

Resolutions:

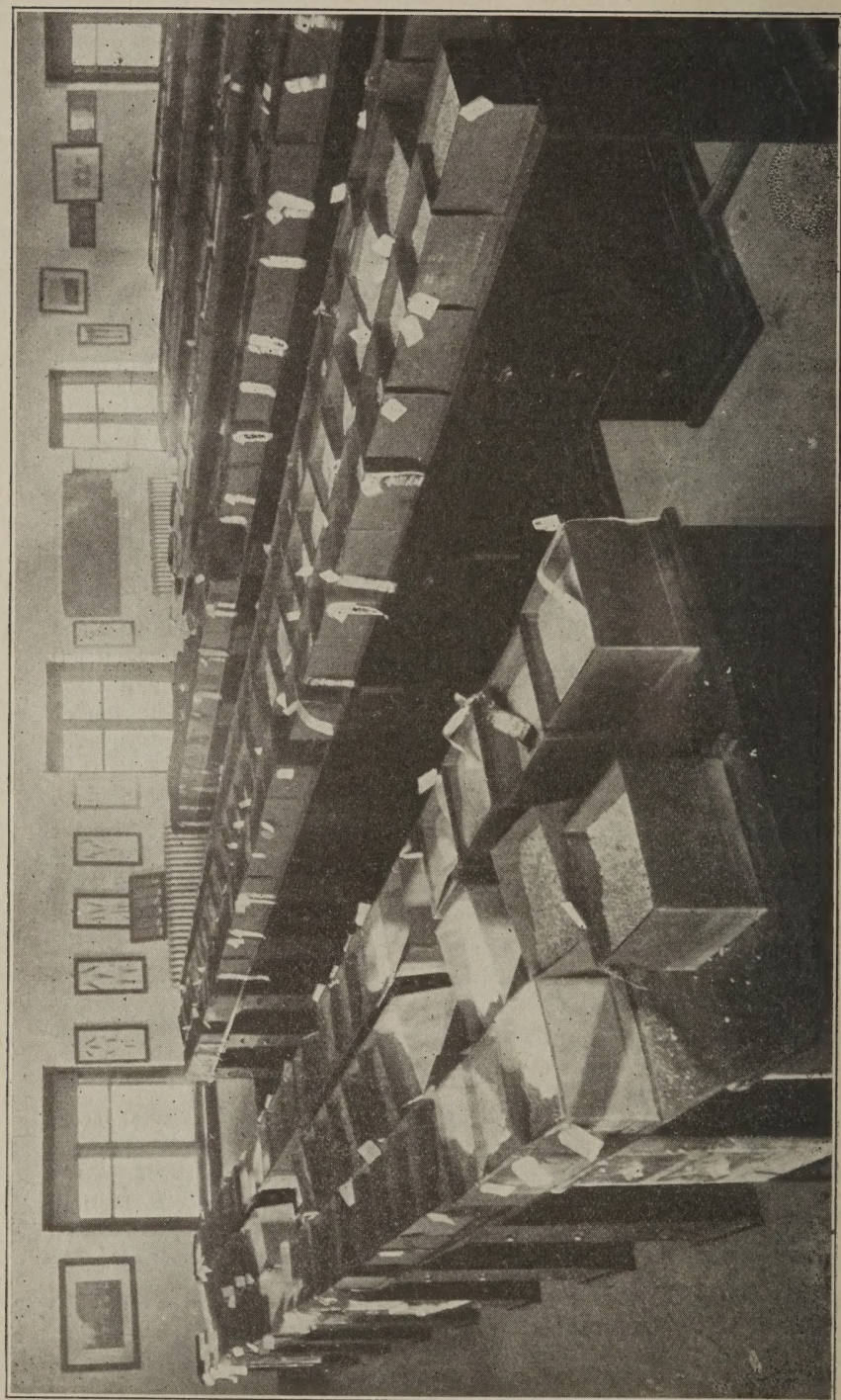
J. B. CHEESMAN.....	Racine
C. P. NORGORD.....	Madison
H. E. KRUEGER.....	Beaver Dam

Finance:

C. P. NORGORD.....	Madison
H. N. LONGLEY.....	Dousman
H. E. KRUEGER.....	Beaver Dam

Cooperative Experiments:

Farm Crops.....	R. A. MOORE
Soils.....	A. R. WHITSON
Farm Engineering.....	F. M. WHITE
Agricultural Chemistry.....	E. B. HART
Agricultural Extension.....	H. L. HATCH
Farm Management.....	D. H. OTIS



PRIZE WINNING EXHIBITS OF GRAINS AND GRASSES, 1918 GRAIN SHOW

CONSTITUTION AND BY-LAWS

CONSTITUTION

Article I—Name.

This organization shall be known as the Wisconsin Agricultural Experiment Association.

Article II—Object.

The object of this association shall be to promote the agricultural interests of the state.

1st. By carrying on experiments and investigations that shall be beneficial to all parties interested in progressive farming.

2d. To form a more perfect union between the former and present students of the Wisconsin College of Agriculture so as to enable them to act in unison for the betterment of rural pursuits in carrying on systematic experiments along the various lines of agriculture;

3d. By growing and disseminating among its constituency new varieties of farm seeds and plants;

4th. By sending literature bearing upon agricultural investigations to its membership, and

5th. By holding an annual meeting in order to report and discuss topics and experiments beneficial to the members of the association.

Article III—Membership.

Section I. All former, present and future students and instructors of the Wisconsin College of Agriculture shall be entitled to become members of this association.

Section II. Honorary membership may be conferred upon any one interested in progressive agriculture by a majority vote at any annual or special meeting of the association.

Article IV—Dues.

A fee of fifty cents shall be collected from each member annually.

Article V—Officers.

The officers of this association shall consist of a president, vice president, secretary, and treasurer, whose terms of office shall be one year or until their successors are elected.

Article VI—Duties of Officers.

Section I. It shall be the duty of the president to preside at all meetings of the society and enforce the observance of such rules and regulations as will be for the best interest of the organization; to appoint all regular committees as he may deem expedient for the welfare of the association.

Section II. In the absence of the president, the vice president shall preside and perform all duties of the president.

Section III. It shall be the duty of the secretary to keep all records of the association; to report the results of all cooperative experiments carried on by its membership and the experiment station, plan the experimental work for the members of the association, and labor for the welfare of the society in general.

Section IV. The treasurer shall collect fees, keep secure all funds of the association and pay out money on the written order of the secretary, signed by the president. He shall furnish bonds in the sum of two thousand dollars, with two sureties, for the faithful performance of his duties.

Article VII—Amendments.

This constitution may be amended at any annual meeting by a two-thirds vote of the members of the association present.

Amendment No. 1—Adopted Feb. 9, 1906.

Any person residing within the state having completed a course in agriculture in any college equivalent to that given by the Wisconsin University, may become a member of this association under the same regulations as students from the Wisconsin College of Agriculture.

Amendment No. 2—Adopted Feb. 11, 1909.

Any County Agricultural School within the state may be admitted to membership of the Experiment Association upon request by the principal of such school and the payment of an annual fee of \$1.00.

BY-LAWS

Article I. The officers of this association shall be elected by ballot at the annual meeting.

Art. II. The president and secretary shall be ex officio members of the executive committee.

Art. III. This association shall be governed by Roberts' Rules of Order.

Art. IV. All members joining at the organization of this association shall be known as charter members.

Art. V. The time and place of the annual meeting shall be determined by the executive and program committees.

Constitution adopted and organization effected Feb. 22, 1901.

PRESIDENT'S ANNUAL ADDRESS

F. R. BELL, Columbus

The privilege of serving as President of this Association for the past year is an honor which I highly appreciate.

Never before in the history of our country or association have we been confronted by conditions such as we have had to contend with in the past eight months or rather since Congress, driven by the wrongs to the American people, and the danger to a whole world's freedom, declared war upon Germany.

The whole civilized world cries for bread, for meat, for produce and products of every kind. You know the results. Prices have gone up and up, until they have reached heights never even thought of in the wildest dreams of the present generation. In these high prices lies a very real danger that the aims of our association and the high ideals of our Secretary may not be allowed to reach their fullest realization.

With our acre yield of wheat exceeded by only one state and that by 6/10 of a bushel only, our oats yield 3rd, over the top with barley and near it with rye and corn.

With our hundreds of active members and with their thousands of bushels of pure bred seed, we are in a position not held by any other association or body of men in this or any other country to increase the yield of foods and fats for a starving world.

The temptation to cash grains at the present high prices is very great, one must admit. With one and one-half millions men withdrawn from the productive walks of life to be welded into a machine to consume and destroy, this must not be done. Our responsibilities to our country and ourselves will not allow us to dispose of a single bushel for consumptive uses, until the last fertile acre in our own state and neighboring states has been seeded with these prepotent high yielding pure bred seed grains.

Do you need money? Go to your banker. No banker in Wisconsin will refuse a loan made to hold seed until seed time. Your interest will be but a trifle paid easily by increased value of your lands and the fact that you have done your duty to your country, your fellowmen and yourself will be an added payment. In the meantime advertise "Pure Bred Seed Grain" talk "Pure Bred Seed Grain," aye! dream "Pure Bred Seed Grains." Right here we will meet these three men "The man who knows and knows not that he knows. He sleeps, awaken him. The man who knows not and knows that he knows not, he is awake, teach him, and the man who knows not but thinks he knows, he is a fool, leave him.

I think a very slick fellow placed me in the latter class in 1916. While stacking oats an automobile rolled into my yard and a gentleman dressed to the minute alighted and came over where we were at work and after commenting on the nice quality of grain we were handling, etc., from a box which he carried exposed to our view a few heads of oats, truly the longest I ever saw. These were the result of the labors of some oats wizard of New York, which had been so bred up that on thin fields of New York they would yield 100 bushels per acre. While on our rich Wisconsin fields 300 up to 450 would not be an unusual yield. Then he flashed his order book and showed a long list of names. Not one man of whom had attended our farm schools, not one of whom was a member of our County Order, nor do I think of the State Association. He had heard that I was President of the County Order and an order from me would be great help to him, etc. When he paused for breath I asked him; "if he had the endorsement of Professor Moore and the Wisconsin College of Agriculture?" "No, but Moore likes them, he likes them very much." Knowing Mr. Moore's slowness to grab a good thing for the farmers of Wisconsin, much to Mr. Man's disgust, we did not trade. A diligent inquiry on my part has unearthed but one lot of these wonderful oats. One hundred bushels from 4 bushels of seed and an investment of \$12 sown in the Garden spot of Dane county. While 4 bushels of our own Pedigree No. 1 oats gave me 150 bushels. This is not told in the expectation that any member will do likewise but rather that you will see some of the tricks which farmers have to meet and which we must overcome for their good and incidentally for our own.

In the light of the awful sacrifices of France, of Italy, of Belgium, of England, of Serbia and the rest of our Allies, to save themselves and us from the terrible fate which the modern Atli has planned for them and no less for us, we can never be forgiven unless we strain our effort to the breaking point to increase the production of foods and fat. For in the final analysis when the last battle is won and the war is no more, bread will be the bullets that bring peace.

In closing, we have the grain, we have the organization, we have the will to increase the 1918 crops manyfold, and may we be permitted to live, if we may, and die, if we must, for the glory and the honor of America.



PRIZE WINNING EXHIBITS OF WHEAT, OATS AND BARLEY, 1918 GRAIN SHOW

SECRETARY'S ANNUAL REPORT FOR 1917

R. A. MOORE, Madison

Members of the Wisconsin Experiment Association and Fellow
Agricultural Workers:

Another year has rolled around and it again becomes my duty to present to you my sixteenth annual report of the Wisconsin Experiment Association. It is needless to say that the Association has made great strides and the good results are radiating out to all parts of the world in rapid succession. In usefulness the Association has surpassed the fondest expectations of all its admirers, and we at times stop to think of what the ultimate outcome of the great pure bred seed grain work will be.

DISSEMINATION OF PEDIGREE SEEDS

At first the Association began by supplying neighboring farmers with the Pedigree seeds. Then it expanded so that members of the Association began to ship over the county line, and later over the state lines, and now to foreign countries, so consequently the good work of the Association spreads broadcast over the entire world.

This past year, beset with trials and difficulties, has been a serious one for the Association. Our country is in the throes of a great war, and the Association feels it as probably no other organization in the state. It is the purpose of this organization to furnish the seed which produces the food for our own and allied armies, and consequently we have accepted the task which carries with it the burden that it is now our duty to perform. I know that not a single member will hesitate in doing his just duty toward his country, and that all will be ready to put in a little more time, and sacrifice a great many things which have

heretofore been a pleasure for the sake of winning the war. It is no place for us to hesitate, but true to the principles which we inaugurated when the Association was organized will we go forward putting forth every ounce of energy that is within us until we succeed in establishing truth, principle and liberty throughout the world to large and small countries alike.

In order to win the war our country is in need of funds and it is the sincere hope of your Secretary that every one will set aside sufficient funds from the sale of pure bred seeds to invest in Liberty Bonds. There is no safer security in our country, and our patriotic duty is to loan, if possible, practically every cent that can be spared until our country emerges from the difficulty in which she finds herself plunged. With this end in view the Experiment Association will put forth every ounce of energy within it to carry out these views.

MEMBERSHIP

The membership of our Association is very gratifying having reached the mark of 1,371 at the close of 1917. This healthy growth of the Association since its organization is exceedingly gratifying. Even in these trying times the membership holds up close to the high water mark. The membership stated are all those who paid up, down to the close of the year. Our bona fide membership is much larger as none of the members are listed who had not paid their fee during the past year. These, of course, will pay fees later, so consequently the bona fide membership of the state association is very close to 2,000 instead of 1,371, as reported.

Nearly all of these members are doing active work and live on farms; all acting with the one common purpose in mind—that of forever eradicating scrub seeds from our state and placing on the farms of the state and elsewhere the pure bred Pedigree seeds.

COUNTY ORDERS

The number of County Orders has gradually increased until at the present time we have fifty-three counties under organization with a total membership of approximately 3,000.

ALFALFA ORDER

The Alfalfa Order of the Experiment Association has gradually increased its membership and its capacity for doing work until it now has a membership of nearly 1,000, all active, live wires, that are doing a grand good work in the way of dissemination of better methods of growing this great crop alfalfa.

HEMP ORDER OF THE EXPERIMENT ASSOCIATION

One of the last units to be added to the Wisconsin Experiment Association is known as the Hemp Order. This combines into one great working body the hemp growers of Wisconsin. It may be interesting for the members of the Experiment Association to know that nine years ago the Department of Agronomy started hemp growing work in this state. It has taken many years to receive the fruits of our labor, but the work has gradually advanced and at such rapid pace of late years that it seemed the best for all concerned to have these growers helped by uniting with our Association. It may be interesting for the members to hear that last year nearly 8,000 acres of hemp were grown in Wisconsin, and the prospects the coming year are that approximately twice that amount will be sown. Wisconsin now ranks as the second state in America in growing hemp, and has more up-to-date hemp machinery than all other states combined.

One of the great difficulties that can be solved for the hemp growers is the production of hemp seed. There is no reason why the members of our Association cannot do well by growing seed for the members of the Hemp Growers Order and help out in this worthy line of effort.

Professor Wright who has been assigned this line of effort during the past two years has made excellent progress on breeding such varieties of seed as will mature good hemp fiber in this state. We feel that in order to succeed we will be obliged in the end to grow most of our own seed instead of letting other states do it for us, so consequently we are offering considerable hope to the members of the Hemp Order, and we sincerely trust that these hopes may be fully realized in the end.

SEED INSPECTION

We were not able to do the large amount of seed inspection in 1917 that we did the previous year. This was largely brought about by the change that had to be made through the resignation of Mr. Garland. Considerable additional work was heaped upon his successor so that we were not able to visit and report upon the large number of members that we did heretofore. However, in each and every case the membership was requested to send in bona fide samples of their seed before and after cleaning. This was done, and a line as to the quality of seed was secured in this manner. While this method is not considered as good as the personal inspection of the farm and seeds, yet it was the very best that could be done. We have great confidence, however, in the honesty of members and it is only once in a great while that any questionable seed is put on the market.

EXHIBIT OF PURE BRED SEEDS

The exhibit of seeds made at the last annual meeting of the Experiment Association was certainly a credit to the members, and we trust that this good work of competing in a friendly way with the Pedigree seeds will continue to be one of the features of our future annual meetings. The exhibition room is really an educational field where all have an opportunity of viewing the very best that can be produced in the land, and get a mental picture of what are almost perfect seeds of the various kinds. This mental picture is then carried back to the farms and an opportunity for emulation is secured by the members who attend these shows. It seems to me there is no member of the Association that can afford to stay away from the annual meeting of the Association. The life of the work is bound up in progress, and unless members attend our shows from year to year they undoubtedly will soon drift behind in this worthy line of effort. Consequently it is the wish of your Secretary to remind every member of the Association that it is his duty to be present. We like to have every member exhibit, but if one is not fortunate in having seeds that can be exhibited he should be present at least in person to help on in the discussions and

learn the most up-to-date methods relating to pure bred seeds that are brought before the Association.

PURE BRED SEED GRAIN TRAIN

A Pure Seed and Home Power Special was run throughout the state. Twenty-seven meetings were held and something in the neighborhood of 7,000 people attended. A full account of the success of this enterprise was written up in the 15th Annual Report. I wish to call the members' attention to it, however, so that they will read and think over this matter more carefully. We hope that this line of effort can be continued another year as in my estimation no one act of the Association has so thoroughly fixed in the minds of the people the value of the Pedigree seeds as the lesson taught on the pure bred seed grain special.

COUNTY FAIRS

At the many County Fairs listed during the past fall, one of the things in particular that pleased me was the fact that members of the Wisconsin Experiment Association are lending a helping hand towards putting up pure bred seed grain shows and exhibiting at their County Fairs. This, of course, should be encouraged and emphasized as the County Fairs are becoming more and more educational in character and I feel that this has been brought about quite largely through the energetic efforts of members of the Association to emphasize lines of educational efforts at such County Fairs. While considerable has been done along this line of effort, yet it does seem to me that there isn't half as much done as should be, and I hope that members of this Association will fully realize the importance of the fact that they are not only growers of pure bred seeds but disseminators of the best agricultural thought. In order to do this line of effort, it is the duty of every member of the Association to prepare exhibits for his County and State Fairs, and also the State Association meeting at Madison.

NEW LINES OF WORK

Several new lines of effort will be undertaken this coming year, and I cannot too thoroughly emphasize at the present time

that all members of the Association should be sure and treat all seed grains for the prevention of smut and other diseases. We feel that the people of the state are already beginning to lose quite a percentage of oats from smut. There is no necessity for any loss at all as the method of treatment is simple and very effective. A bulletin giving full information concerning the treatment of grains for smut can be secured by dropping a card to the Wisconsin College of Agriculture.

SWEET CLOVER

During the past year considerable effort was put forth in the way of growing sweet clover as a farm crop. Some successes were scored, but we have recorded a large number of failures, or at least partial failures. We hope after the present annual meeting to have much new information on this particular subject.

ALFALFA

A great expansion has been made in the growing of this great field crop. The Alfalfa Order of the Experiment Association under the able management of Professor Graber is largely responsible for the leaps and bounds made in this excellent line of endeavor. In a single year 54 tons of seed were sent out for dissemination purposes, and our acreage has gone up steadily until we are now credited by the United States Government with having 72,000 acres into this great milk producing plant. We are going on at a very rapid pace, and are having less failures and more successes.

SOY BEANS

The growth of the soy bean has gone forward steadily and is now of great importance to that portion of the state known as the sandy district. Soy beans can be grown on very sandy land providing they receive the proper inoculation. This is easily accomplished by securing a pure culture from the Wisconsin College of Agriculture, or by sprinkling on the seed before

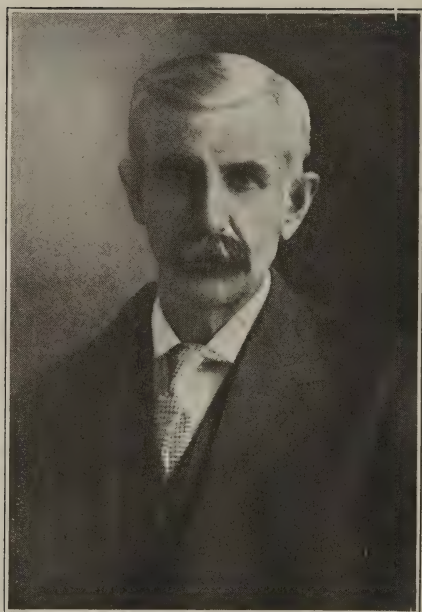
planting some of the bacteria laden earth taken from a field where beans have been grown successfully.

A limited number of soy beans will again be distributed to the members of the Association this year as we wish to expand that line of effort. Many silos are now filled with soy beans, and a great deal of exceedingly fine hay is put up in the dairy districts of the sandy regions. It is safe to say that the soy bean is filling a long felt want. Any member who is not supplied with the soy bean bulletin can receive the same by merely asking for it.

FIELD PEAS

A line of effort which has not received the emphasis that should have been placed upon a crop which is of so much importance is that of growing field peas. Through the old common varieties the growing of field peas has been somewhat on the decrease. Prof. E. J. Delwiche of the Branch stations has recently gotten out several Pedigree strains of field peas which give much higher yields than the common varieties, and are much more uniform in their growth. It seems that, with the high price that field peas now command, this should be a very profitable work for members of the Association to engage in. There is no reason why for seed peas there could not at least \$1.00 a bushel over and above the general market price be secured, so consequently I urge with considerable emphasis the going into this line of effort. At the present time seed stock of field peas and canning peas could be secured by addressing Prof. E. J. Delwiche, Northern Branch Station, Farm, Ashland, Wisconsin.

Considerable emphasis has also been placed upon the growing of canning peas, and a steady demand for good seed stock has been made by our canning factories. It would seem to me this line of effort ought also to be a profitable one for the members of our Association.



CHARLES MORGAN

Memorial

CHARLES MORGAN

Once more the grim reaper has called from his ranks one of our faithful and true workers and it is with regret that we announce his departure from this life. Charles John Morgan was born in Brecksville, Ohio, February 27, 1851. In the fall of 1852 he came with his parents to Monroe, Wisconsin, where he lived till the spring of 1903. From that time until his death, he lived at Albany, Wisconsin.

He served his township and county a number of times in various offices. He was numbered among the progressive stock raisers of Wisconsin and his advice and counsel in business was often sought. He leaves a place in the ranks of mature business men of his community which is hard to fill.

When he was a boy fourteen years of age he assumed the responsibilities of his father's farm. The work was hard in those days and the burden heavy for the shoulders of this growing young boy, but he made it possible for the younger brothers and sisters to enjoy advantages denied to him. Such worldly possessions as he had were the results of his own endeavors. The Golden Rule was well exemplified in his life. To those who are left to grieve his loss he will be remembered for this loyalty to any cause which he thought was right.

The Wisconsin Agricultural Experiment Association has lost one of its faithful members and extends its sincere sympathies to the sorrowing relations.



JOHN S. EASTMAN

Memorial

JOHN S. EASTMAN

Another member of the Association has just answered the final call, that comes to all of us in due time, and taken his departure for the Great Beyond.

John S. Eastman of Madison, who for many years has been a loyal member of the Association and deeply interested in its work, died after a brief illness Thursday evening, April 25, age 58 years. Mr. Eastman was an electrician by profession but dearly loved agriculture and owned and operated two large farms near the place of his birth. Spartensburg, Pa. His earnest desire was to grow and disseminate pure bred seed grains and better farm conditions in his native state. He was called home to his Maker before his plans had been fully carried out, but we feel sure that the noble work he started in agriculture will live after him.

The writer was intimately acquainted with Mr. Eastman for many years and knew much of his inner life and noble purposes. It can be truthfully said of him that he stood for the better things of life and in his modest way gave much encouragement to his fellow man. For many years Mr. Eastman was active in temperance work and put forth his earnest efforts to make Madison a better city to live in.

He leaves a wife, young son, mother, three brothers and four sisters to mourn his loss.

The members of the Wisconsin Experiment Association feel his loss keenly and wish to convey their earnest sympathy to his wife and son and sorrowing relatives.

MARKETING OF PURE BRED SEEDS

HENRY MICHELS, MALONE

In the season just beginning the marketing of our seeds should receive more attention than ever before in spite of the fact that it will be easier to find a market than in ordinary years.

The supply of high class seeds of all kinds is going to be very short. There is but little corn. Clover and grasses made a light crop. Rye is coming into prominence because of its value as a wheat substitute. Oats are high in the market and farmers are going to prepare for a better crop by sowing better seed. The Kherson strains in particular are becoming very popular. Wheat will be in great demand as the acreage is increasing from year to year.

In our eagerness to get all the business we can, we are likely to disregard the fellow at the other end of the deal and ship something that may be not entirely to his satisfaction nor our own best interest.

We can never harp too much on keeping up the highest standards in the seeds we send out. We make a bid for the seed business on the strength of our argument that the Experimental Association stands for the best qualities of the best strains of seeds obtainable.

It is the duty of each individual member every time he makes a sale to live up to the reputation that the Association has established through long years of patient effort.

We must not lose sight of the fact that the Association makes it possible for us to do business as we are doing it and that every deal we make must be of such a character that the reputation of the Association will not suffer.

We collectively are the Association, and every act that reflects unfavorably on the Association will come back to the individual sooner or later.

Successful enterprises are founded upon the theory that a satisfied customer brings another and every deal must be made with an eye to the future.

Honesty and fairness must be the foundation upon which a business must be built if it is to be successful in the long run. Highest quality must be the aim. Every man must try to do his part a little better than the other fellow is doing it.

No seed grains should be sent out without being thoroughly fanned and screened. Even pedigree seeds will not yield well if light shrunken kernels are used.

Noxious weeds in seeds cannot be excused under any circumstances. The customer who pays good money for pedigree seed, does so in the hope that it will yield him a greater profit from his land. If he increases his yield by a few bushels per acre but at the same time finds patches of quack grass, Canada thistle or other bad weeds start up where the pedigree seed had grown, he is not likely to be pleased with his bargain.

It goes without saying that varieties must be kept strictly pure. Grains mix easily in the seeder, by the threshing machine, and in the bins and great care must be taken to avoid this. Corn will mix some under the best conditions obtainable through cross pollenization in the field but every effort must be made to eliminate off colored kernels and cobs.

Marketing seeds of high quality if undertaken in a business-like way is a very pleasant undertaking. Customers appreciate a square deal and their words of commendation are a source of great encouragement.

The average customer is honest, he does not demand more than he pays for, he is reasonable in everything and on the whole is a good fellow whose friendship should be cultivated. The seller who regards his customer only as a source of money and treats him accordingly, makes a big mistake, not only morally but from the financial standpoint.

It is only natural that a man engage in the seed business for the sake of the money he can make out of it. But the man who

looks at this side of it only and does not cultivate the friendship of his customers must have a hard conscience.

The best way to get the confidence of a prospective customer is to let him know that you stand squarely back of anything he may buy of you. If a customer has been disappointed in what he receives, it will not improve his regard for you by quibbling. I firmly believe in giving the broadest kind of a guarantee.

In a prominent place on every piece of literature we send out we plainly inform the customer that he himself is to judge whether he has received full value for his money and if he does not think he has we want him to return the seeds and we will refund the full amount he has paid us with transportation charges both ways.

It is very rarely indeed that a customer will take an unfair advantage of us and it has cost us practically nothing to live up to the guarantee. Besides, we know we get a great many orders that would not otherwise come to us.

Of course in a business of any size, most of the orders will come through the mails, and the management of this calls for close attention to the best recognized business practices.

A good many sales can be made to customers who have been directed to the member either through the secretary's office, the sale list or other literature published by the Association. But a member should not expect the Association to be his advertising agent.

This organization was established for the purpose of increasing the production of our farm crops and not to furnish an outlet for our surplus seeds. The business we get through inquiries received by the secretary's office is incidental to our work and is not the prime object of the Association. Each member must manage the selling end of his own business. The better he manages it the bigger it will grow.

The principals involved in the disposition of seeds from grower to planter by mail are the same as those which govern any mercantile mail order business.

The first step in the sale of seeds is to inform the man who wants to buy that you have the goods he wants. You must go to him before he can come to you. The best way to bring buyer and seller together is through advertising.

An agricultural paper is to be preferred to a general newspaper as its entire issue goes to farmers. Farmers of all classes whether live stock raisers or grain growers are in need of seeds every year so there is little to choose between a general agricultural paper and one that is devoted strictly to live stock.

In the case of newspapers, not only does a large percentage of the edition go to city people who are not interested in seeds, but a prospective purchaser knows that he can get in touch with the man who has what he wants more surely through a farm paper which caters to the farmers' needs in particular.

There may be instances where economical results can be obtained by using the home newspaper, but judging from my own limited experience, I would say that such cases were rare, and that such advertising, even though the rate per line or per inch is low, is expensive when the proportion of sales to advertising expense is considered.

The particular farm paper or papers to use would depend largely upon the seed to be sold.

In general I would say, "Try to get in touch with Wisconsin people, by using Wisconsin papers."

Wisconsin farmers buy more improved seeds than do the farmers of other states because the work of the Association has brought them to realize their superiority more fully. Also farmers will generally prefer to buy in their own state to save freight charges. Choose a paper which has a large circulation in the territory which you wish to reach.

Advertising space in a high class paper is very expensive and all that should be attempted is merely to inform the reader that you have what he wants. If he is interested he will write for further information and prices.

Having obtained the names of parties who are interested in seeds, the next step is to induce them to become customers. The reply to an inquiry may be made either in the form of a written letter or printed circular, or both. The reply should give the prospective customer all the information he needs in regard to breeding, productivity, germination, purity and prices. The seller must claim for his goods all they will stand but no more. Unreasonable boasts or bluffs never get a customer.

Every statement must be clear and easily understood so the reader gets the impression that he is about to deal with a square man.

It is of utmost importance that all correspondence be taken care of promptly. There is little excuse for not answering a letter by return mail. If letters are left to lie around for several days until a number have accumulated the answers are likely to be written hastily, penmanship will be careless, explanations be inadequate, and in general the prospective customer will be given the impression that you do not care enough about his business to give it your thought and time.

A buyer so slighted, usually does and is entirely justified in giving his order to someone who gives him better treatment. We must never lose sight of the fact that successful marketing of seeds require just as careful methods as the marketing of any other commodity, and that, other things being equal, the man who is the most careful in looking after the smaller details is the one who gets the business.

There is no other mark that betrays carelessness so surely and so quickly as the failure to give all matters prompt attention. If a correspondent has to wait a week before he gets an answer to an inquiry, he is fully justified in believing that the shipment of his order will be delayed still more.

Samples should be sent in all cases whether they are asked for or not. The sample must represent the actual condition of the seed as it will be shipped out. If it is better cleaned or in any way superior to the seed sent, it will result in a dissatisfied customer and a permanent loss of trade from that customer and all others with whom he communicates. The sample need not be large. One which can be mailed with the letter without necessitating extra postage is usually large enough.

Of course if a large order is in sight, a liberal size sample sent under cover of a separate mailing envelope will do no harm. Sample ears of corn should not be sent. It is as impossible to convey a correct impression of a lot of corn by sending one ear as it is to form an idea of the quality of a sack of barley by examining one kernel. It is harder to actually sample corn than other seeds especially if the sample be small.

The seller should always bear in mind, that a person who is in the market for any considerable quantity of seeds usually addresses inquiries to a number of parties, and the one who finally gets the order is the one who the customer believes will give him the satisfactory deal.

After receiving an order, the earlier seeds can be shipped the better. In the early part of the season when seeds will not be needed for sometime and when orders are not coming in fast, it is permissible in most cases to delay the shipment a few days, but later in the season shipments must be made at once as customers are then in a hurry and will worry about any unaccounted for delay.

If shipment is not made immediately, he must be told at what date it will go forward. The bill of lading should be mailed immediately after the shipment is consigned. It is not enough to merely send a card saying that goods have been delivered to the railroad.

Shipment should be made in substantial packages. Burlap sacks are not suitable for shipping seeds. They are likely to be torn in shipment, and they are almost useless to a customer after he has emptied the seed from them.

We make all our shipments in 16-oz cotton grain bags and charge market value for them. Packages should be made to look as neat and attractive as possible, but an artistic shipping tag and fancy box will not make up for a deficiency in quality but rather serve to set it off. It may seem unnecessary to call attention to the law which requires shippers to state name of variety, purity and germination percentages on shipping tags, but I know it to be a fact that some of our members fail to do this.

Not only is this a violation of the law punishable by a fine, but it inspires a distrust in the customer and his future orders are likely to be sent to a law abiding seedsman.

The duty of the shipper does not end with the delivery of the seed to the railroad. He must be willing to help trace delayed shipments for a customer, and in case of loss or damage he is the man who should file the claim for damages against the railroad as he is more familiar with the steps necessary to take than his customer.

Finally the shipper must stand ready to promptly refund money to any customer who is not satisfied even though it may seem that he expected too much. In short the entire treatment of the customer from the time that his inquiry is received until after the seed has been delivered must be such that he will order again. Besides one word which he may say in your favor to a

neighbor or a friend of his who is in the market for seeds, will do more for you than the best circular you can get out or the most convincing letter you can write.

Neither a seed business nor any other business can ever be made a permanent success if a new customer must be found for every sale that is made. If it is true that a new sucker is born every minute, it is just as true that every one that is caught makes enough of a splash about it to serve as an effective warning to all others who may be within hearing distance. As hearing distance is very great in these days of telephones and fast mails, the fishing soon becomes very poor for the man who does not give a dollar's worth for every dollar received.

A summary of all I have said can be put in the shape of Ten Commandments which govern the conduct of a successful seed business:—

First—Have a high grade article.

Second—Advertise it.

Third—Answer each inquiry honestly, promptly, fully, clearly, intelligently, individually.

Fourth—Use printed stationery and if the business is large enough to warrant it, use a typewriter.

Fifth—Keep your books in good shape so as to avoid mistakes. Unintentional errors are a most fruitful source of dissatisfaction.

Sixth—Ship seeds promptly, in substantial packages, and strictly of the same grade as promised.

Seventh—Be willing to trace delayed consignments for your customers and put in claims against carriers for damaged shipments.

Eighth—Back up your goods with the most liberal guarantee you can give even though it may seem that you are giving the customer too much leeway.

Ninth—If you are in the habit of getting out a printed circular, send one to each customer the next season as a reminder that you are still in business.

Tenth—Make your customer understand that your interest in him does not cease as soon as you have his money.

SEED GRAIN TREATMENT

R. E. VAUGHAN

Wisconsin Experiment Station.

More grain with less labor is the call of the day. The country needs an increased amount of wheat, barley, oats and rye and we must make every acre produce its greatest yield to meet this demand. Last year grain smuts and blight caused a considerable loss of the crop. Oats smut for example took a toll of about three million bushels representing monetary loss of nearly two and one-fourth million dollars, a loss which could have been largely prevented by seed treatment. Seed Treatment then means ammunition to win the war. Many farmers treated their grain last year, so that if it was not reinfected from nearby smutty fields or threshing machines, it will not be necessary for them to treat this year.

Barley stripe is a relatively new disease in our barley fields, but last year it caused large losses especially in the southern and eastern counties. It is known to cause more trouble when the season is cold and wet after the seed is put in the ground. The slower growth of the young plants seems to give the fungus a greater opportunity to get in its destructive work. The disease is spread by spores with the seed the same as with smuts. But unfortunately, the common dipping or sprinkling, which will control smut, will not control the stripe. However, stripe can be controlled if the seed is soaked in the formaldehyde solution for two hours. The strength of formaldehyde to use is one pint or pound of the strong commercial 40 per cent strength to 30 or 35 gallons of water. Put the seed you are going to treat in gunny sacks and submerge them in the solution in a barrel or tank. Stir them around a few times and when the two hours

is passed, drain and dry on a clean barn floor or canvas. Shovel over a few times to hasten drying.

The seed plot offers a solution for the farmer who does not have time nor labor to treat all his barley this year. This method is to soak seed enough for a few acres which should then be planted alone where it will not be contaminated by spores of the stripe blowing in from nearby fields. When mature, the grain from this plot should be threshed separately and kept by itself and used without treatment for the general crop next year. The 2-hour soaking will clean up all of the covered smut as well as the stripe and practically all of the loose smut.

Seed treating machines are coming into use in many places and are giving good satisfaction in controlling smut on oats, stinking smut on wheat and covered smut on barley. A number of our county agents have these machines and will loan them to the farmers in their counties this season. The treatment with the machines is often not quite as efficient as the short soaking but it has the advantage of requiring less labor.

The "dry method" of seed treatment has been very successfully used in controlling oats smuts. It has not been tried enough with barley, wheat and rye so that it can be recommended for these grains. The treatment by this method is to provide a quart hand atomizer or sprayer and fill it with a formaldehyde solution made up from 1 pint of the strong 40 per cent formaldehyde and 1 pint of water. Hold the atomizer near the grain and spray on the solution as the grain is being shoveled over. The quart of solution is sufficient for 40 to 50 bushels of oats. When the spray has all been applied pile up the oats and cover them with a damp blanket, canvas or sacks for five hours or over night. They are then ready to sow or may be bagged up for future use.

The advantage of the dry method is that it may be applied several weeks before seeding as the amount of liquid applied is so small that there is no danger of the seed being injured by freezing, heating or sprouting.

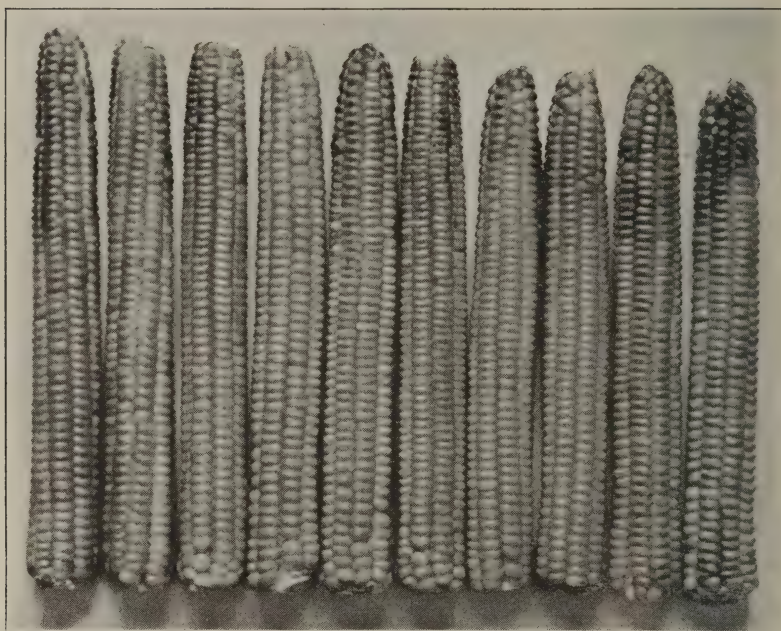
Ergot in rye can be removed by putting the seed into a 20 per cent salt brine. The ergot will rise to the surface and can be floated off leaving the clean rye. After separation the salt solution should be drawn off and the seed rinsed in clean water

to remove the excess of salt. The seed may then be quickly dried on a clean barn floor or canvas.

Black rust on grain causes large losses each year especially to spring grains and in seasons when there is considerable damp weather. Rust lives over winter on grain straw and grasses and in the spring spreads to the common barberry. It is here multiplied with great rapidity and returns again to the grains to start epidemics of rust. Seed Treatment is of no value in rust control and it is doubtful if rust can be entirely eliminated by any method. However, if the common European barberry bushes are pulled up and burned the rust will have no place to get a quick start in the spring. The small amount of rust that lives over in other ways will not be plentiful enough to cause severe outbreaks until after the majority of the grain is mature.

The common barberry is harmful. Dig it up! But fortunately the dwarf Japanese barberry is harmless and may be planted. In fact 10 plants of the dwarf kind are already being planted to one of the common tall kind.

Recent publications which will be helpful in handling grain diseases are: "Treat Seed Grains," Bankers' Farm Bulletin No. 56, March 1918; Wisconsin Experiment Station circulars: "Fight Grain Smuts and Blights," No. 57, revised, and "Ergot in Rye," No. 94.



PRIZE WINNING EXHIBIT OF SMUT NOSE FLINT CORN

Won by H. T. Draheim, Gotham, 1918 Grain Show.



GOLDEN GLOW WIS. NO. 12 CORN

First Premium Honorary Class, Won by J. Emmett, Brunner, Ridgeway,
1918 Grain Show

THE IMPORTANCE OF OFFICIAL CROP REPORTS

W. F. CALLANDER, Field Agent

Wisconsin Cooperative Crop Reporting Service

Never in the history of the United States have so many people and organizations been interested in food production as at the present time. "Food Will Win the War," meets the eye everywhere—but how are we to know whether we are overproducing or underproducing along any particular line? For many years the United States Government has maintained a crop reporting service, which publishes from time to time, reports on crop prospects and crop production as well as on numbers and value of live stock. These reports have been read and used to advantage by intelligent farmers in the marketing of their crops. Large commercial concerns have also been close students of these reports, in order to properly distribute their products, and the railroads have relied upon them to a large extent in the distribution of their cars for handling crops. People in general, however, have paid but little attention to the crop reports. Now, however, what we have produced on our farms and what we are likely to produce in the near future are matters of vital interest to everyone, and the crop reporting service of the United States Government cooperating with State agencies has become an important branch of the Government. Crop reports are eagerly read by many classes of people.

Without definite information of what is being produced, the United States Food Administration and other Federal and State agencies would be unable to intelligently formulate satisfactory food policies and regulations and those having charge of campaigns to increase the production of certain crops, such as wheat,

would be working in the dark without definite knowledge of what has been produced in the past. Furthermore, unless the approximate production of a crop was known, it would be impossible to determine the surplus available for export—a very important matter at this time.

In Wisconsin the work of crop reporting has been greatly improved during the past year by the combination of the crop reporting work of the United States Department of Agriculture and the Wisconsin Department of Agriculture, together with an improved law requiring assessors to gather crop statistics and send their reports direct to Madison. The final crop report for 1917 shows that Wisconsin has added to her acreage in crops since the last United States census, nearly 800,000 acres, or at the rate of about 100,000 acres a year. Many of the northern counties have practically doubled their area of cultivated land since the last census, while a number of the southern counties also show gratifying increases in cultivated acreage due to the drainage of marsh land. The change in acreage of the principal crops from 1909 to 1917 is shown below:

	1917	1909	Percentage increase	Percentage decrease
Corn	1,918,000	1,458,000	31	
Oats	2,250,000	2,165,000	4	
Winter wheat	93,000	62,000	50	
Spring wheat	146,000	75,000	95	
Barley	600,000	816,000		26
Buckwheat	23,000	26,000		11
Rye	410,000	339,000	21	
Beans	33,300	15,000	122	
Clover and timothy	2,647,000	2,499,000	6	
Alfalfa	72,000	18,000	300	
Potatoes	307,000	290,000	6	
Tobacco	48,300	40,400	19	
Sugar beets	18,200	12,400	42	
Cabbage	16,700	10,000	67	
Hemp	7,000			

It will be noted that alfalfa shows the greatest relative increase. The distribution of this crop in 1909 and 1917 is shown on the accompanying chart.

Definite information as to the acreage and production of crops by counties for the State has been furnished to the Agricultural Extension Service of the College, as well as to other State agencies engaged in campaigns to increase crop production.

ALFA

A 300 per cent increase in the acreage of alfalfa since 1909.

1909



Total acreage, 1909—17,986 (Census)



Total acreage, 1917—72,069 (Assessors)

1 dot represents 10 acres.

WHY THE FARMER SHOULD BE INTERESTED IN CROP REPORTS

Few farmers realize why the Government crop reports are of importance to him. Many are of the opinion that these reports are gotten out more for the benefit of grain and food speculators than for the benefit of the farmer, but such is far from true. Were it not for the Government crop reports, speculators interested in raising or lowering prices of farm products would issue so many conflicting and misleading reports that it would be practically impossible for anyone without great expense to form an accurate estimate of crop conditions and prospects. Farmers would suffer most from such conditions because they are not so well organized as other lines of business, nor are they in position to take advantage of fluctuations in market prices. The disinterested reports of the Government tend to prevent the circulation of false or misleading reports by speculators who are interested in controlling or manipulating prices.

If the Government crop reports were discontinued, the farmer would have no reliable information concerning crop prospects except in his own immediate neighborhood, and for crop prospects in other localities he would have to depend upon such information as interested speculators and dealers might choose to publish in the newspapers, which might or might not be correct. Prices are controlled more by the condition of the whole crop throughout the State or the United States and even foreign countries than by local conditions. The entire wheat crop of a county may be destroyed and yet the prices may be low or his county may have a bumper crop and the prices be unusually high, depending upon whether or not there is a surplus or a deficiency in the entire crop elsewhere. If the farmer reads the crop reports and forecasts of the Government as they are issued, he will be in position to judge for himself what the crop prospects are, as well as the probable prices, so he can decide intelligently how to market his produce and how to deal with the local buyers. Even the farmers who do not keep posted are indirectly benefited by the publication of Government crop estimates, because these estimates automatically tend to check and lessen the injurious effects of false reports sent out broadcast by interested speculators and their agents, in the same way that a police or con-

stable force tends to check but not entirely prevent crime in a community.

Large manufacturing concerns, agricultural implements and hardware dealers and jobbers, who neither buy nor sell farm products, are much interested in crop prospects. This knowledge enables them to distribute their wares economically, sending much to sections where crops are good and farmers will have money to buy and less to sections where crops are short and farmers will have less to spend. By avoiding heavy losses from improper distribution, manufacturers can afford to sell on better terms with resulting benefit to farmers.

The railroads of the country, which move the crops from the farm to the market must know in advance the probable size of the crop in order to provide a sufficient number of cars to handle it effectively and without delay. Cases are not infrequent when prices of grain or other products at railroad stations are reduced or there is absolutely no sale for the grain, because cars are not available for shipping, the farmer thus being among the sufferers.

SWEET CLOVER

As a Soil Builder and Feed Crop

W. P. GRAHAM, Rochelle, Ill.

I have been asked for the manuscript of an address delivered by me at the University of Wisconsin, recently, on the subject of Sweet Clover, to the end that it might be published in the Sixteenth Annual Report of the Wisconsin Agricultural Experiment Association. The following is a reproduction, as near as may be, of the main points brought out in my address.

During the last eight years I have been raising Sweet Clover on my farms at Rochelle, Illinois; first, as an interesting experiment; second, as an established and permanent branch of my farming operations. Raising Sweet Clover has passed the experimental stage on my farms and has become, instead, an essential and indispensable feed and fertilizer crop.

Sweet Clover is destined to play so important a part in soil building, at the same time producing prodigious quantities of feed, that it might be best to consider the plant from that angle, first.

I began growing Sweet Clover after I had tried, unsuccessfully, to grow the other clovers and alfalfa. I had found the other clovers and alfalfa unsatisfactory and uncertain, owing to certain climatic and soil conditions in Northern Illinois.

My experience with ordinary clovers and alfalfa was that, if I did not lose the stand in the dry summer weather, or by over-pasturing, I would lose it by freezing in the winter or Spring. I found that red and mammoth clover and alfalfa kill very easily, if pastured closely in the Fall. I also had trouble with cattle bloating, when pasturing these crops in the early Spring. These legumes are not successful as seed crops in my section of

the State. I have never been able to find where these plants have proved satisfactory as silage.

I had been working to evolve a system whereby I could produce feed—and plenty of it—from the same land and during the same season that I raised a cash crop, at no expense to my cash crop and, instead of robbing the soil, build up the soil year by year. To accomplish this ideal result, I was compelled to forsake the ordinary clovers and alfalfa and turn to a drouth resisting and comparatively frost proof plant. Hence my first experiments with Sweet Clover.

I have found that Sweet Clover does not succumb to drouth or to freezing which readily kills the other legumes. I have found that Sweet Clover may be sown with any of the small grain crops without detriment to the latter. I have found that I can raise a good crop of summer pasture, hay or silage along with the grain crop, thereby insuring a cheap by-product crop of feed without interfering with my cash crop. I have found that Sweet Clover, instead of robbing the soil, actually produces an excess of humus, nitrogen and even some potash.

As a feed for stock Sweet Clover is now recognized as a balanced ration and is equal to alfalfa in nutrition. Sweet Clover has the added advantage over other legumes in that it can be utilized as silage. Instead of using my cash crop for ensilage, I am able to utilize Sweet Clover, grown strictly as a by-product, to fill my silos.

I then began to work upon the problem of a cheaper and more profitable method of cattle feeding—putting on flesh at less cost. The plan of cattle feeding, as followed during the last 15 to 20 years, has not been a sure-profit plan. I felt convinced that the only way to eliminate the risk in cattle feeding was to produce a silage from a by-product crop, and use less of the cash crop in fattening cattle. I have found that Sweet Clover makes this possible.

I have placed my feeders on Sweet Clover pasture in the Fall after the nurse crop was removed, and had an average gain of 3 lbs. per day per steer for 60 days. The steers were then placed in the feed yard and fed on Sweet Clover silage and an average of 19 lbs. per steer of ground ear corn. On this ration the steers gained an average of 3 lbs. per day per steer, for 30 days. As

an experiment, I then gradually increased the corn ration to $32\frac{1}{2}$ lbs. per day per steer for 30 days, and the steers gained only $2\frac{3}{4}$ lbs. per day per steer, though upon a more expensive ration than the previous 30 days. Thus I proved to my entire satisfaction that I could fatten my steers on feed containing a *preponderance* of a *by-product* crop and make them gain in weight as fast, if not, indeed, faster, than by feeding my high priced cash crop.

Personally, I have not experimented with Sweet Clover as a feed for dairy cows. I have never engaged in the dairy business. However, wherever Sweet Clover has been used as feed for producing milk, it has been found to be equal to any other forage. As an instance, Prof. R. A. Moore, of the University of Wisconsin, related to me the experience of a dairy farmer not far from Madison. Having removed the nurse crop with which Sweet Clover had been sown, this farmer found that he had a good stand of Sweet Clover and he turned his cows into the field. Within three days the cows were producing double the amount of milk that they had produced just before going onto the Sweet Clover pasture.

Considering the fact that Sweet Clover can be produced as a by-product crop; that it is available for pasturage as early as the middle of April, and in the Summer and Fall when the ordinary pasture is useless; that it is as good a milk producer as any known forage; that the milk produced is strictly a by-product and is therefore a profit over and above the cash crops raised; that, in spite of either drouth or frost, the dairyman is insured a plentiful supply of feed for his dairy stock; in face of these proven facts, it seems to me that Sweet Clover will be the solution of the ever recurring milk question which has caused so much trouble during the last year, and previously.

After eight years of careful experimentation and actual experience with Sweet Clover as a Soil Builder and Feed Crop, I have confidently come to the following conclusions:

1. As a feed, whether as pasture, hay or silage, Sweet Clover is equal to any known forage crop, if, indeed, it is not the most balanced ration that can be fed to live stock.

2. Sweet Clover is the most certain crop that can be raised among the legumes, on account of the fact that it is both drouth

resistant and withstands the freezing conditions better, either in Winter or Spring.

3. As a conditioner for feeders, prior to putting them into the feed yard for fattening, Sweet Clover pasture is superior to any other feed, and the cheapest as well, as they are not only put into prime condition for the fattening pen but unusual gains are made at the same time.



PASTURING THE SPRING CROP BY APRIL 15.
GRAHAM FARM, ROCHELLE, ILL.

4. As a fattening feed, coupled with grain, Sweet Clover silage is superior to any other forage for putting weight onto feeding steers; this is probably on account of the presence of *cumarin*, which seems to act as an intestinal and kidney corrective and keeps the animals in perfect health.

5. As an available and cheap forage crop for dairy cattle, Sweet Clover seems to fill the niche ideally, as there is no question about an unfailing Summer and Fall pasture the first season and early Spring pasturage the second season's growth; while as a milk producer, Sweet Clover is the equal of any other forage crop, if not the best.

6. As a soil builder, either as a humus producer or as a nitrogen gatherer, Sweet Clover has no peer. It is well-known that Sweet Clover thrives only where the soil is inoculated with the nitrogen gathering bacteria. The root system of Sweet Clover,

which dies naturally every two years, and which penetrates the soil to great depths, containing, as we know, a high percentage of protein and carbohydrates, produces great quantities of humus. The disintegration of the roots is very rapid. It is claimed, also, that the roots of Sweet Clover lift potash from depths beyond the reach of ordinary crop plants. As a green manure, if, indeed, one could bring himself to plow under such a valuable forage plant, Sweet Clover surpasses any other legume, on account of the prodigious yield per acre. Sweet Clover can be grown upon the poorest kind of soil and be made to build up such soil to a standard of average crop producing land.

7. As a rotation crop, Sweet Clover is the ideal plant, for the reason that it is a biennial and thereby makes it convenient if not compulsory, to rotate the crop every two years, with a very valuable by-product crop of pasturage or silage the first year, and two crops the second year, viz: either two months early pasturage in the Spring or a crop of hay or silage about the first of June, and a seed crop in the Fall together with a large crop of straw which can be fed as roughage or put into the silo. By this system of rotation the land is fertilized automatically and effectively every few years.

8. Throughout the Central States the land is usually deficient in lime. The lack of lime in the soil is more likely to be overlooked than that of any other necessary soil ingredient. It is one of the least expensive of all commercial products supplied to the soil, and perhaps the most neglected. To raise Sweet Clover successfully there must be an abundance of lime in the soil. The farmer who raises Sweet Clover, either as a feed crop or as green manure, will naturally be compelled to see to it that his land contains sufficient lime; thus, indirectly, Sweet Clover induces him to do what he otherwise may have failed to do, no matter how badly his land is in need of lime. The lime not utilized by the Sweet Clover will add to the productiveness of the land for any crops following.

9. To recapitulate: I have found Sweet Clover to be the most certain of all legume crops; to be the best conditioner for feeder steers; to be the best substitute in cutting the grain ration for fattening cattle; to be the most available and the cheapest dairy stock forage; to be the most ideal and practical rotation crop; and to be the one prolific crop that can be grown as

a by-product without either harming the nurse crop or impoverishing the land.

10. When the farmers have learned that Sweet Clover is not a "noxious weed" and begin to utilize it along the lines that my experience has taught me it can be utilized, then, and not until then, will the cry for feed, feed and more feed, at less cost, be truly realized. When beef and milk can be produced in the Great Corn Belt as a *by-product*, then will both the producer and the consumer feel that he has come into his own.

REPORT OF ASSOCIATION'S COOPERATIVE EXPERIMENTAL WORK 1917

H. W. ALBERTZ.

Sweet Clover Experiments

Seeded Spring of 1917.

Reported Fall of 1917.

The object of this experiment was to determine the advantages and disadvantages of different methods of seeding and the sources of difficulties, if any were experienced by the members.

The total number of members reporting were twenty-two, representing twenty different counties.

The methods of seeding used were as follows:

1. Hulled seed sown on fall grain.
2. Hulled seed sown with spring grain.
3. Hulled seed sown without a nurse crop.
4. Unhulled seed sown early.

Reports were received from members in twenty different counties in the state. Owing to an unfavorable year, very few secured a good stand. Several report that the stand was good until July and August. After the dry weather, much of it was killed out.

Seed sown on fall grain.

Four members reported as follows:

Good stand.

Hardly grew at all.

Fair stand.

Very uneven stand. Plowed it up.

Hulled seed sown with spring grain.

Thirteen members reported:

2 report fair stand.

11 report poor stand.

Hulled seed sown without nurse crop.

Two members reported:

15 inches. Good stand.

10 inches. Fair stand.

Unhulled seed sown early.

Seven members reported:

5 reported good stand.

1 reported poor stand.

1 reported failure.

Poor stands were reported on acid soils.

From the reports received this year it seems the best stand may be secured by sowing sweet clover early, preferably when some snow is still on the ground, with a winter grain as a nurse crop.

The reason for the better growth seems to be that the freezing and thawing in the early spring causes the extremely hard sweet clover seeds to germinate more quickly when the warm weather comes and thus gives it a good opportunity to make a rapid growth in the early summer.

The following extracts from the members' reports will show the results with last year's experiments:

Billie Johnson, Strong Prairie, Adams Co.

Sweet clover was a complete failure. The land was not limed nor inoculated.

Robert J. Plenty, Rice Lake, Barron Co.

It came through the summer quite well but was rather yellow in color.

Adam Holzschuh, So. Kaukauna, Brown Co.

Rape and sweet clover were sown for hog pasture. It grew over the rape until the dry weather set in, then it discontinued to grow.

A. J. Veith, Sun Prairie, Dane Co.

Did not inoculate. Stand is very thin. Good stand of medium red clover in a field adjacent to sweet clover.

Andres Bergum, De Forest, Dane Co.

Land was too loose for sweet clover. Barley lodged. Medium clover comes fine.

H. E. Krueger, Beaver Dam, Dodge Co.

Good stand with oats as nurse crop.

Roy McDonald, Menomonie, Dunn Co.

I had no difficulty in securing a stand this year or last year. I am confident that sweet clover will grow here. I planted a small plot of sweet clover about August 10th last year (1916). It grew to be 8 inches high in fall, wintered well and were the first plants up high enough for pasture in the spring. Cut the crop for hay in June. Crop was spoiled by rain. Second crop was cut for seed. Pods did not seem to be well filled.

Jos. A. Bruncker, Ridgeway, Iowa Co.

Sown with barley as nurse crop. Grew to be 12 inches high in fall.

Frank F. Prochnow, Luxemburg, Kewaunee Co.

Sown in spring on winter wheat. Too dry. Did not grow after wheat was cut.

H. W. Whitehead, Rockland, La Crosse Co.

Fair stand, 8 to 12 inches high.

Walter Reich, Irma, Lincoln Co.

Hardly any sweet clover to be seen after the oats were cut.

Arthur Rusa, Ringle, Marathon Co.

Stand fair.

W. J. Niven, Dunbar, Marinette Co.

Tried several methods of seeding. Secured best results if sown early on winter grain.

F. D. Bailey, Prescott, Pierce Co.

Poor stand due to drought and weeds. Rye was not a good crop on this plot either.

Harold Frost, Almond, Portage Co.

Stand thin. Soil not inoculated and slightly acid. Alsike clover did not do well on strip along side of sweet clover, although alsike caught better.

O. Q. Chambers, Union Grove, Racine Co.

Sown on winter rye after snow was gone. Came through summer good. Pastured.

F. B. Jones, Deer Park, St. Croix Co.

Good growth till hot weather during July and August.

Fay Bros., New Richmond, St. Croix Co.

Hot weather during summer did not affect it very much. Cut a crop of hay and tried the second crop for seed. Early frost injured the seed. We do not like the hay as it is too coarse.

Hugo E. Wunsch, R. 1, Sheboygan, Sheboygan Co.

Dry weather did not affect it much. Stand looks O. K.

Charles Ellickson, Wautoma, Waushara Co.

Dry weather did not affect stand sown with oats as nurse crop. About 7 inches high and quite thick. Unhulled seed sown on snow did not grow.

REPORT ON SWEET CLOVER—1917.

Seeded in Spring of 1916.

Number of report	SURVIVED WINTER			PASTURE		HAY	Seed yield per acre	Remarks
	Good	Poor	Winter killed	When	What on it	Did they like it	No. of cuttings per acre	
1	+	—	—	Fall	Cows	+	1	5 ft. tall; thick; no 2nd crop.
2	—	—	—	—	—	—	—	N. G.
3	—	—	—	—	—	—	—	Came up fine; wind storm took it.
4	—	—	—	—	—	—	—	Neither pasture nor hay; tried to improve sand; good.
5	—	—	—	—	—	—	—	Poor stand; not worth cutting.
6	—	—	—	—	—	—	—	Does not amount to much.
7	—	—	—	—	Calves	Fairly well	2	Not pastured; cannot compete with clover and alfalfa.
8	—	—	—	—	—	—	1	Did well on brush pile ashes.
9	—	—	—	—	—	—	1	No second crop.
10	—	—	—	—	—	—	1	Weedy after first cutting.
11	—	—	—	Fall	2 sows	Very well	1	Wants to get it started in out of way places.
12	—	—	—	Aug. 15	Cows	Good	4	Too coarse for hay; heavy yielder.
13	—	—	—	—	Hogs	Yes, before course	—	Winter severe so clover crops were failure.
14	—	—	—	Fall	Sheep & swine	Fairly well	—	Thinks alfalfa pasture better if good stand.
15	—	—	—	Started May 15	Cattle	—	1	spring if kept down by cutting.
16	—	—	—	Oct. 1	—	—	1	Fair stand. Will try to cut and make hay of it next year.
17	—	—	—	—	—	—	—	Does not do well.
18	—	—	—	—	—	—	—	—
19	—	—	—	—	—	—	—	—
20	—	—	—	—	—	—	—	Nurse crop not cut early enough. Lodged bad so not worth leaving and plowed under.
21	—	—	—	—	—	—	1.5	Not fed any hay; good stand—14' high; sweet clover stalk 6' 8" high.
22	—	—	—	—	—	—	2	Likes Alfalfa better—not so coarse.
23	—	—	—	—	—	—	3.5	No second crop—cut too late.
24	—	—	—	—	—	—	1	Came fine second year.
25	—	—	—	—	—	—	1	Thinks it great for sandy land. Let it stand.
26	—	—	—	6" tall	Hogs	—	2	Died after first cutting.
27	—	—	—	—	—	—	1	Got too hard.
28	—	—	—	—	—	—	1	Alfalfa better; should be mixed with other grasses.
29	—	—	—	May 1	Hogs	—	1	Sold farm; owner ploughed up field.
30	—	—	—	—	Cattle	—	1	Does not amount to much.
31	—	—	—	—	—	No	—	Poor stand; what survived put up for hay; cattle liked it.

Reports from members of Experiment Association on the yields of Pedigree grains grown in 1917.

PEDIGREE BARLEY

Number of members reporting.....	202
Average yield Pedigree Barley.....bu.	36.9
Average yield other varieties in Wis.....	33.8
Difference in favor of Pedigree Barley.....	3.1

PEDIGREE OATS

Number of members reporting.....	185
Average yield Pedigree No. 1 Oats.....bu.	53.4
" " " No. 5 Oats.....	47.5
" " Sixty Day Oats.....	55.3
" " of all Pedigree Oats.....	52.1
" " other varieties Oats.....	46.9
Difference in favor of Pedigree Oats.....	5.2

PEDIGREE RYE

Number of members reporting.....	50
Average yield of Pedigree Rye.....bu.	27.0
Practically no other varieties now grown by members.	

CORN

Number of members reporting.....	114
Average yield of No. 7 corn.....bu.	41.9
" " " " 12 "	46.8
" " " " 8 "	42.7

The average yields of corn were obtained from members reporting corn yields. The majority of members reported no yields whatever because the corn did not mature. It will be noted that the average yield of No. 7 corn was low, due to early frosts.

WHEAT

Number of members reporting Winter Wheat.....	69
Number of members reporting Spring Wheat.....	115
Average yield of Winter Wheat.....bu.	24.9
" " " Spring Wheat.....bu.	23.0
Difference in favor of Winter Wheat.....	1.9

STATE HIGH SCHOOL CORN JUDGING CONTEST

HELD AT THE COLLEGE OF AGRICULTURE
FEBRUARY 9, 1918.

Agriculture is now being taught in over one hundred high schools in the State of Wisconsin by thoroughly trained college and normal graduates. The high school has for many years been promoting friendly contests of an athletic, declamatory or oratorical nature, but only recently has there been anything attempted in the line of contest in vocational subjects. It is now becoming a common thing to hold garden contests, stock-judging contests, or girls' canning contests, not only within the individual school, but also between schools of a county or section of the state. Not until the past year, however, has there been attempted a state-wide corn judging contest where the winning teams of the several sections of the state could be brought together for a "tryout of brains" in selecting good seed corn. This event was staged last winter by the Wisconsin Experiment Association in conjunction with the Annual Live Stock Judging Contest, Mr. T. L. Bewick, State Leader of Boys' and Girls' Clubs, being in charge and assisted by Professor R. A. Moore and his able force of assistants. The contest was a decided success and received very favorable comments from members of the Association. It will be continued another year with probably added features.

The holding of the contest during the time of the Annual Meeting of the Association affords a great opportunity for these boys to see the best grain exhibit the state can put up. Specially conducted excursions through the exhibit rooms were a part of last year's program, together with lectures and discussions on the judging of grains.

The contest proved to be very close and a number of expert corn judges were discovered. The decision of the judges announced at the final meeting by Professor Moore was the crowning feature of the contest. From among the fifty boys who took part, the winners were asked to stand, amid the cheers of their fellow contestants. A silver cup, together with other valuable prizes, was offered by the Association, and the following is a list of the winners and their score as graded by the judges.



THE CHAMPION TEAM

TEAM PRIZES

School	Score	Prize
1st Team—Marinette County School of Agriculture	2212	Silver Cup
2nd Team—Milwaukee County School of Agriculture	2175	\$5.00
3rd Team—Walworth High School.....	2135	Honorable mention

INDIVIDUAL PRIZES

School	Score	Prize
1st Prize—Edmund Lindow, Plymouth, Wis. Plymouth High School.....	877	\$5.00
2nd Prize—Rexford Crothers, Kilbourn, Wis. Kilbourn High School.....	834	\$3.00

The next ten prizes consisted of enough corn to plant one acre.

1. Vilas Suttle, Onalaska, Wis.—La Crosse County School of Agriculture.
2. Harry Treleven, Omro, Wis.—Omro High School.
3. Earl Fahland, Frederick, Wis. Frederick High School.
4. Ernest Heggstad, Blanchardville, Wis.—Blanchardville High School.

5. R. Klussendorf, Wauwatosa, Wis.—Milwaukee Co. School of Agriculture.

6. H. Loomis, Marinette, Wis.—Marinette County School of Agriculture.

7. Geo. Levy, Wauwatosa, Wis.—Milwaukee County School of Agriculture.

8. Bert Schrader, Omro, Wis.—Omro High School.

9. Walter Schawbe, Walworth, Wis.—Walworth High School.

10. Emil Jensen, Marinette, Wis.—Marinette Co. School of Agriculture.

CONSTITUTION AND BY-LAWS OF THE COUNTY ORDERS OF THE WISCONSIN AGRICULTURAL EXPERIMENT ASSOCIATION

Article I—Name. The organization shall be known as the
.....County Order of the Wisconsin Experiment Association.

Article II.—Object. The object of this organization shall be to promote the agricultural interests of the County and State in general.

1st. By cooperating with the Experiment Association in growing and disseminating pure bred seed grains.

2nd. By having Associations' exhibits at agricultural fairs.

3rd. By having annual meetings in order to report and discuss topics beneficial to the members of the Order.

Article III—Membership. 1. Any person may become a member of this Order who has taken a course in the College of Agriculture at Madison or at any place in the State under the jurisdiction of the College.

2. Any one who is interested in pure bred grains and live stock or in progressive farming in general may become a member of this Order.

3. Honorary membership may be conferred upon anyone interested in progressive agriculture by a majority vote at any annual or special meeting.

Article IV.—Dues. A fee of fifty cents shall be collected from each member annually.

Article V—Officers. The officers of this Order shall consist of a President, Vice President and Secretary-Treasurer, whose terms of office shall be one year, or until their successors are elected.

Article VI—Duties of Officers. 1. It shall be the duty of the President to preside at all meetings of the Order and to enforce the observance of such rules and regulations as will be for the best interest of the organization; to appoint all regular committees as he may deem expedient for the welfare of the Order.

2. In the absence of the President, the Vice President shall preside and perform the duties of the President.

3. The Secretary-Treasurer shall keep the records of all meetings and proceedings of the Order, also the names of all members and their addresses. He shall also keep the funds of the Order, collect all fees, pay all debts, and shall submit a written statement of all moneys received and paid out by him and shall balance his books not later than one month before the annual meeting.

Article VII—Disbursements. The funds of the Order shall be used to defray expenses or by vote of the Order for such purposes as will advance the agricultural interests of the Order and shall be paid out only upon an order signed by the President and countersigned by the Secretary.

Article VIII—Amendments. This constitution may be amended at any meeting, by a two-thirds vote of the members of the Order present.

BY-LAWS

Article I—The officers of this Order shall be elected by ballot at the annual meeting.

Article II—This Order shall be governed by Roberts' Rules of Order.

Article III—All members joining at the organization of this Order shall be known as Charter Members.

Article IV—The time and place of holding the annual meeting shall be determined by the officers.

Adopted....., 19....

CONSTITUTION AND BY-LAWS OF THE TOWNSHIP AGRICULTURAL CLUBS

ARTICLE I. NAME

The organization shall be known as the (Name of township) Agricultural Club.

ARTICLE II. OBJECT

The object of this organization shall be to promote the agricultural interests of the town, county, and state.

1st. By cooperating with the County Order and State Experiment Association in growing and disseminating pure bred seed grains.

2nd. By having town and individual exhibits at County Fairs and other agricultural exhibitions.

3rd. By having at least one annual meeting and several special meetings in order to report and discuss topics beneficial to the members of the club.

4th. The special meetings should be social in character and the program shall consist of debates, discussions, readings, together with vocal and instrumental music.

ARTICLE III. MEMBERSHIP

1. Any person may become a member of this township club who is especially interested in agriculture.

2. Honorary membership may be conferred upon anyone interested in progressive agriculture by a majority vote at any annual or special meeting.

ARTICLE IV. DUES

A fee of twenty-five cents shall be collected from each member annually.

ARTICLE V. OFFICERS

The officers of this organization shall consist of a President, Vice President, and Secretary-Treasurer, whose term of office shall be one year, or until their successors are elected.

ARTICLE VI. DUTIES OF OFFICERS

1. It shall be the duty of the President to preside at all meetings of the club and to enforce the observation of such rules and regulations as will be for the best interest of the organization, to appoint all regular committees as he may deem expedient for the welfare of the Association.

2. In the absence of the President the Vice President shall preside and perform the duties of the President.

3. The Secretary-Treasurer shall keep the records of all meetings and proceedings of the club, also the names of all members and their addresses. He shall also keep the funds of the club, collect all fees, pay all debts, and shall submit a written statement of all moneys received and paid out by him and shall balance his books not later than one month before the annual meeting.

ARTICLE VII. DISBURSEMENTS

The funds of the club shall be used to defray its expenses or by vote of the club for such purposes as will advance the agricultural interests of the organization and shall be paid out only upon an order signed by the President and countersigned by the Secretary.

ARTICLE VIII. AMENDMENTS

This constitution may be amended at any meeting by a two-thirds vote of the members of the club present.

BY-LAWS

ARTICLE I.

The officers of this club shall be elected by ballot at the annual meeting.

ARTICLE II.

This club shall be governed by Roberts' Rules of Order. The Secretary shall report the organization of the club with names and addresses of officers to the Secretary of the county order and the Secretary of the state association immediately after organization and all changes annually in officers thereafter.

RESOLUTIONS

POTATO DESICCATING FACTORIES AND FLOUR PRODUCING MILLS

WHEREAS, recent reports of the Department of Agriculture and of the International Institute of Agriculture indicate the most serious shortages of most cereals. The amount on hand has not kept pace with the increase in population. To better this condition and save the flour producing cereals for our armies is our earnest aim. Through many tests it has been found that all articles of pastry can partially be made from potato flour, and there is no good reason why desiccated potatoes can not be used widespread in America as they are now used in Europe and thus save a large part of the crop which goes to waste annually. Therefore,

BE IT RESOLVED, that this Association recommend to the United States Government the establishment of potato flour and desiccating plants in a sufficient number of states to provide flour and dried potato products from this farm crop.

THE COMMON BARBERRY

WHEREAS, In view of the present urgent need for food grain production it is important that losses be prevented wherever possible. The great losses from grain rusts are well-known. Inasmuch as a large proportion of plant pathologists hold the common barberry to be a prolific source of trouble and so widespread as to call for their removal, and that additional plantings of the barberry should cease.

BE IT RESOLVED, that this association pledges its most serious consideration of this subject and immediate action to prevent by all practical means the extension of rust.

STANDARD SEED CORN VALUES

WHEREAS, numerous complaints have come to members of the Experiment Association of exorbitant prices charged for seed corn.

BE IT RESOLVED: that this Association in annual meeting assembled strongly condemn such practice on the part of seed growers or seed dealers. We feel there should not be an attempt to ask exorbitant prices for seed and take advantage of the situation at this trying time. Prices should be formulated on plans suggested by the Government on costs, plus ten per cent profit. We further feel keenly that costs to the planter may be fair and reasonable so that all may be able to increase the food output of the country.

Committee on Resolutions,

JAMES B. CHEESMAN, *Chairman.*

C. P. NORGORD,

HENRY E. KRUEGER.

COUNTY AGRICULTURAL ADVISERS

This Association records its strong appreciation of the work of County Agricultural Advisers: and urges their employment in a more extended territory as one of the most potent means of increasing the crop yields of Wisconsin.

SWEET CLOVER PLANT

The imperative needs of increased yields of animal products of all kinds invites the attention of every live stock grower to leguminous plants. In this species of fodder crops sweet clover claims a prominent place; and its recent crop records and work in the live stock field have proved it a most economic plant.

TREASURER'S REPORT

Peter C. Swartz, treasurer, reported on the financial condition of the association as follows:

Balance in association treasury, Feb. 11, 1917-----	\$ 480.35
Receipts, Feb. 11, 1917 to Feb. 8, 1918-----	1,559.73
<hr/>	
Total receipts on hand Feb. 8, 1918-----	\$2,040.08
Total disbursements Feb. 11, 1917 to Feb. 8, 1918---	880.09
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Balance in association treasury, Feb. 8, 1918-----	\$1,159.99

SECRETARY'S REPORT

R. A. Moore, secretary, reported on the use and condition of state funds. He reported as follows:

Balance in state treasury Feb. 11, 1917-----	\$2,558.34
State appropriation, July 1, 1917-----	5,000.00
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Total -----	\$7,558.34
Total disbursements, Feb. 11, 1917 to Feb. 8, 1918---	5,028.22
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Balance in state treasury Feb. 8, 1918-----	\$2,530.12

The itemized financial reports are on file for inspection in the office of the association.

PREMIUM AWARDS

AT ANNUAL PURE BRED GRAIN SHOW

Feb. 7-9, 1918

COLLEGE OF AGRICULTURE, MADISON, WIS.

- 10 Ears Silver King (Wisconsin No. 7) Corn, North Section
First—A. G. Ruemmele & Sons, Hudson
- 10 Ears Early Yellow Dent (Wisconsin No. 8) Corn, North Section
First—Fred Cisar, Oconto, R. 2
- 10 Ears Golden Glow (Wisconsin No. 12) Corn, North Section
First—A. G. Ruemmele & Sons, Hudson
Second—Wm. Ohlfs, Crivitz.
- 10 Ears (Wisconsin No. 25), Corn, North Section
First—C. A. Correll, Crivitz
Second—J. Carstens, Crivitz
- 10 Ears Silver King (Wisconsin No. 7) Corn, South Section
First—John Bendel, Stoddard, R. 1.
Second—Kaltenberg & Sons, Waunakee.
Third—Henry Lunz, Portage
Fourth—Walter J. Steinhoff, Platteville
Fifth—Jos. A. Bruncker, Ridgeway
- 10 Ears Early Yellow Dent (Wisconsin No. 8) Corn, South Section
First—Lang Bros., Jefferson.
Second—H. E. Krueger, Beaver Dam
- 10 Ears Golden Glow (Wisconsin No. 12) Corn, South Section
First—H. T. Draheim, Gotham
Second—Jos. A. Bruncker, Ridgeway
Third—Jippa Wielinga, Midway
Fourth—Frank Violet, Onalaska, R. 1.
Fifth—Lang Bros., Jefferson
- 10 Ears Clark's Yellow Dent (Wisconsin No. 1) Corn, Any Part of State
First—Elmer Biddick, Livingston
Second—H. E. Krueger, Beaver Dam
- 10 Ears Tools North Star (Wisconsin No. 11) Corn, Any Part of State
First—Noyes Raessler, Beloit
Second—H. E. Krueger, Beaver Dam

- 10 Ears Murdock (Wisconsin No. 13) Corn, Any Part of State
 First—Noyes Raessler, Beloit
 Second—Leo Brueckner, Jefferson
 Third—Arthur O. Popp, Jefferson
 Fourth—W. E. Colladay, McFarland
 Fifth—Albert C. Wollin, Johnson Creek
- 10 Ears 8 Row Red, Yellow or Smut Nose Flint Corn, Any Part of State
 First—H. E. Krueger, Beaver Dam
 Second—Albert C. Wollin, Johnson Creek
 Third—Harry Pralle, La Crosse, R. 3
- 10 Ears 8 Row White Flint Corn, Any Part of State
 First—H. E. Krueger, Beaver Dam
- 10 Ears Pop Corn, Any Part of State
 First—Wm. Moos, Onalaska, R. 1
 Second—H. T. Draheim, Gotham
 Third—Garrett Westerhouse, Onalaska
 Fourth—Arthur O. Popp, Jefferson.
- Single Ear Dent Corn, Any Variety, Any Part of State
 First—Frederick Hoffman, Holmen
 Second—H. T. Draheim, Gotham
 Third—Jos. A. Bruncker, Ridgeway
 Fourth—J. Emmett Bruncker, Ridgeway
 Fifth—Arthur O. Popp, Jefferson
- 50 ears Silver King (Wisconsin No. 7) Corn, Any Part of State
 First—J. R. Thorpe, Beloit, R. 29
 Second—Otto Wolfe, La Crosse
 Third—Ed. Peters, La Crosse, R. 2
 Fourth—O. J. Emmert, Johnson Creek
 Fifth—John Bendel, Stoddard, R. 1
- 50 Ears Golden Glow (Wisconsin No. 12) Corn, Any Part of State
 First—Jos. A. Bruncker, Ridgeway
 Second—Noyes Raessler, Beloit
 Third—John Van Loon, La Crosse
 Fourth—Otto Wolfe, La Crosse, R. 2
 Fifth—Jippa Wielinga, Midway
- Peck of Wisconsin Pedigree or Oderbrucker Barley
 First—Minnie L. Krueger, Beaver Dam
 Second—R. Kressin, Cedarburg
 Third—Noyes Raessler, Beloit
 Fourth—Adam Holzschuh, So. Kaukauna, R. 14.
 Fifth—Wm. J. Clemmens, Kansasville
- Peck Two Row Barley
 First—H. E. Krueger, Beaver Dam
- Peck Wisconsin Pedigree No. 1 Oats
 First—Albert Baumgartner, Wrightstown
 Second—Frank J. Gaspar, Rockland
 Third—Morrissey Bros., Arena
 Fourth—Adam Holzschuh, So. Kaukauna, R. 14
 Fifth—J. L. Krause, Beaver Dam

Peck Pedigree No. 5 or Swedish Select Oats (Wisconsin No. 4)

- First—Minnie L. Krueger, Beaver Dam
- Second—Frank J. Gasper, Rockland
- Third—Chas. J. Nieman, Cedarburg
- Fourth—H. W. Whitehead, Rockland
- Fifth—Ed. Peters, La Crosse, R. 2.

Peck Pherson or Sixty Day Oats

- First—H. T. Draheim, Gotham
- Second—Peter Dengel, La Crosse, R. 1
- Third—J. L. Krause, Beaver Dam
- Fourth—Lang Bros., Jefferson
- Fifth—H. E. Krueger, Beaver Dam

Peck Any Other Variety of Oats

- First—W. E. Colladay, McFarland
- Second—Herman Schoeneck, Enterprise
- Third—De Witt Damp, Dane
- Fourth—Joseph Waski, Stevens Point
- Fifth—Albert C. Wollin, Johnson Creek

Peck Winter Wheat

- First—Arthur O. Popp, Jefferson
- Second—Jos. A. Brunker, Ridgeway
- Third—Gilbert Jaeger, Ixonia
- Fourth—J. Emmett Brunker, Ridgeway
- Fifth—Albert Meyer, Beaver Dam

Peck Spring Wheat

- First—Minnie L. Krueger, Beaver Dam
- Second—Chris Michelson, Hazelhurst
- Third—Edgar Huebbe, Beloit
- Fourth—Julius Brue, De Forest
- Fifth—W. W. Winter, Eau Claire

Peck Wisconsin Pedigree Winter Rye

- First—Arthur O. Popp, Jefferson
- Second—R. Kressin, Cedarburg, R. 2
- Third—Geo. H. Leonard, Jefferson, R. 1
- Fourth—Fred Sweniger, Peshtigo
- Fifth—Fred Rebensdorf, Fairchild

Peck Medium Red Clover Seed

- First—Fay Brothers, New Richmond
- Second—Adam Holzschuh, So. Kaukauna, R. 14
- Third—Fred Cisar, Oconto, R. 2
- Fourth—O. J. Emmert, Johnsons Creek
- Fifth—J. Emmet Brunker, Ridgeway

Peck Mammoth Clover Seed

- First—J. L. Krause, Beaver Dam
- Second—A. G. Ruemmele & Sons, Hudson
- Third—Stanley Sebion, Westby
- Fourth—Selmer Oberson, Westby
- Fifth—P. S. Graham, Fennimore

Peck Alsike Clover Seed

- First—Joe Haight, Madison, R. 4
- Second—H. C. Hansen, Spooner
- Third—Otto Wolfe, La Crosse, R. 2
- Fourth—Geo. H. Leonard, R. 1, Jefferson
- Fifth—Julius Brue, De Forest

Peck Timothy Seed

- First—P. S. Graham, Fennimore
- Second—Adam Holzschuh, So. Kaukauna, R. 14
- Third—Peter Trapp, Columbus
- Fourth—A. G. Ruemmele & Sons, Hudson

Peck Alfalfa Seed

(No entries)

Peck Silver Hull Buckwheat

- First—H. E. Krueger, Beaver Dam
- Second—Frank J. Gasper, Rockland
- Third—H. E. Parsons, Crivitz

Peck Japanese Buckwheat

- First—H. T. Draheim, Gotham
- Second—H. E. Krueger, Beaver Dam
- Third—J. L. Krause, Beaver Dam

Peck Black Soy Beans

- First—Emil Jensen, Athelstane
- Second—Geo. Batty, Poynette
- Third—Albert Dettman, Marinette, R. 1
- Fourth—Henry Lunz, Portage
- Fifth—H. E. Parsons, Crivitz

Peck Green Soy Beans

(No entries)

Peck Yellow Soy Beans

- First—H. T. Draheim, Gotham
- Second—Garrett Westerhouse, Onalaska
- Third—Wm. J. Clemmens, Kansasville
- Fourth—R. Kressin, Cedarburg, R. 2

Peck Smooth or Wrinkled Peas

- First—Chas. J. Nieman, Cedarburg
- Second—Wm. R. Leonard, Jefferson, R. 1
- Third—Herman Schoeneck, Enterprise
- Fourth—H. E. Krueger, Beaver Dam

Peck Green or Yellow Field Peas

- First—Herman Schoeneck, Enterprise
- Second—Max Groy, Pembine
- Third—Fred Sweniger, Peshtigo
- Fourth—Fay Bros., New Richmond
- Fifth—A. G. Ruemmele & Sons, Hudson

Sheaf Pedigree or Oderbrucker Barley

- First—H. T. Draheim, Gotham
- Second—Otto Wolfe, La Crosse, R. 2
- Third—H. E. Krueger, Beaver Dam
- Fourth—Lang Bros., Jefferson
- Fifth—Ed. Peters, La Crosse, R. 2

Sheaf Two Row Barley

- First—H. T. Draheim, Gotham
- Second—Herman Schoeneck, Enterprise
- Third—Joseph Waski, Stevens Point

Sheaf Pedigree No. 1 Oats

- First—H. T. Draheim, Gotham.
- Second—H. E. Krueger, Beaver Dam
- Third—Wm. Moos, Onalaska, R. 1
- Fourth—Otto Wolfe, La Crosse, R. 2
- Fifth—J. L. Krause, Beaver Dam

Sheaf Swedish Select or Any Other Variety Oats

- First—Ed. Peters, La Crosse, R. 2
- Second—Wm. Moos, Onalaska, R. 1
- Third—J. L. Krause, Beaver Dam
- Fourth—Otto Wolfe, La Crosse, R. 2
- Fifth—H. E. Krueger, Beaver Dam

Sheaf Winter Wheat

- First—Minnie L. Krueger, Beaver Dam
- Second—Noyes Raessler, Beloit
- Third—Lang Bros., Jefferson
- Fourth—H. E. Krueger, Beaver Dam.
- Fifth—J. L. Krause, Beaver Dam

Sheaf Spring Wheat

- First—Wm. Moos, Onalaska, R. 1
- Second—J. L. Krause, Beaver Dam
- Third—A. G. Ruemmele & Sons, Hudson
- Fourth—Noyes Raessler, Beloit
- Fifth—Ed. Peters, La Crosse, R. 2

Sheaf Pedigree Rye

- First—Otto Wolfe, La Crosse, R. 2
- Second—Arthur O. Popp, Jefferson
- Third—H. E. Krueger, Beaver Dam
- Fourth—Noyes Raessler, Beloit
- Fifth—Ed. Peters, La Crosse, R. 2

Bundle of Alfalfa

- First—John Hesprich, Lomira
- Second—Wm. Moos, Onalaska
- Third—Hiram Michels, Peebles
- Fourth—Arthur O. Popp, Jefferson
- Fifth—H. E. Krueger, Beaver Dam

Best Exhibit of three cuttings of Alfalfa

- First—Arthur O. Popp, Jefferson
- Second—H. E. Krueger, Beaver Dam
- Third—Wm. Moos, Onalaska, R. 1
- Fourth—Stanley Sebion, Westby

Bundle of Red Clover

- First—H. T. Draheim, Gotham
- Second—Walter J. Steinhoff, Platteville
- Third—J. L. Krause, Beaver Dam
- Fourth—Wm. Moos, Onalaska
- Fifth—Wm. J. Clemmens, Kansasville

Bundle of Mammoth Clover

- First—Stanley Sebion, Westby
- Second—H. E. Krueger, Beaver Dam

Bundle of Alsike Clover

- First—H. T. Draheim, Gotham
- Second—Wm. Moos, Onalaska, R. 1
- Third—J. L. Krause, Beaver Dam
- Fourth—Lang Bros., Jefferson
- Fifth—H. E. Krueger, Beaver Dam

Bundle of Timothy

- First—H. T. Draheim, Gotham
- Second—Wm. Moos, Onalaska, R. 1
- Third—J. L. Krause, Beaver Dam
- Fourth—Arthur O. Popp, Jefferson
- Fifth—Walter J. Steinhoff, Platteville

Bundle of Sudan Grass

- First—H. T. Draheim, Gotham
- Second—J. L. Krause, Beaver Dam
- Third—H. E. Krueger, Beaver Dam

Bundle of Soy Beans

- First—Minnie L. Krueger, Beaver Dam
- Second—Otto Wolfe, La Crosse, R. 2
- Third—H. E. Krueger, Beaver Dam
- Fourth—Herman Schoeneck, Enterprise
- Fifth—Harry Pralle, La Crosse, R. 3

HONORARY CLASSES

10 Ears Clark's Yellow Dent (Wisconsin No. 1) Corn

- First—H. T. Draheim, Gotham
- Second—J. R. Thorpe, Beloit, R. 29

10 Ears Silver King (Wisconsin No. 7) Corn

- First—J. R. Thorpe, Beloit, R. 29

10 Ears Early Yellow Dent (Wisconsin No. 8,) Corn

- First—Noyes Raessler, Beloit
- Second—John Van Loon, La Crosse

10 Ears Golden Glow (Wisconsin No. 12) Corn

- First—J. Emmett Brunner, Ridgeway
- Second—Noyes Raessler, Beloit
- Third—John Van Loon, La Crosse

10 Ears Any Variety 8 Row Flint Corn

- First—H. T. Draheim, Gotham
- Second—Arthur O. Popp, Jefferson

Peck Pedigree or Oderbrucker Barley

- First—H. E. Krueger, Beaver Dam
- Second—Adam Holzschuh, So. Kaukauna, R. 14

Peck Pedigree No. 1 Oats

- First—H. T. Draheim, Gotham
- Second—Noyes Raessler, Beloit

Peck Pedigree No. 5 or Swedish Select Oats

First—H. T. Draheim, Gotham

Second—Chris. Michelson, Hazelhurst

Peck Winter Wheat

First—J. L. Krause, Beaver Dam

Second—H. E. Krueger, Beaver Dam

Third—Noyes Raessler, Beloit

Peck Spring Wheat

First—H. E. Krueger, Beaver Dam

Peck Pedigree Rye

First—Noyes Raessler, Beloit

Second—Edward Whitemore, Wausau, R. 2

Third—H. E. Krueger, Beaver Dam

SWEEPSTAKES CLASS

Best Peck Spring Wheat

First—Minnie L. Krueger, Beaver Dam

Best Peck Pedigree Rye

First—Noyes Raessler, Beloit

Best Peck Wisconsin Pedigree No. 1, Oats

First—H. T. Draheim, Gotham

Best Peck Wisconsin Pedigree No. 5 Oats

First—Minnie L. Krueger, Beaver Dam

Best Peck Wisconsin Pedigree Barley

First—Minnie L. Krueger, Beaver Dam

Best 10 Ears Silver King Corn of entire Show

First—J. R. Thorpe, Beloit, R. 29

Best 10 Ears Yellow Dent Corn of entire Show

First—H. T. Draheim, Gotham

Best 50 Ears Silver King Corn

First—J. R. Thorpe, Beloit, R. 29

Grand Champion 10 Ears Dent Corn of Entire Show

First—H. T. Draheim, Gotham

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Vice President—W. H. Clark, Rice Lake.
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Alfalfa Session

PRESIDENT'S ADDRESS

PETER C. SWARTZ, Waukesha.

Members of the Alfalfa Order:

I heartily welcome you all to this annual meeting, and I hope it may not only entertain you but inspire you to greater zeal and efficiency in starting and growing more alfalfa in this great Badger State. You may ask why it is so essential to grow more alfalfa when it is a known fact that the world's granary bin will be swept clean before the new crop is harvested. Scores of things point to alfalfa as the foremost, essential and patriotic crop for Badger farmers to adopt and grow. Every new idea or thing like alfalfa that has benefited the world has to fight through three battles for its life. First, long we ridicule. Second, we discuss. Third, we adopt. It gives me great pleasure to announce at this time that alfalfa has won its fight in these three battles here in Wisconsin and we have adopted it. I am going to persuade you to grow more alfalfa, but it seems to me more like offering you gold nuggets and then begging you to accept them. Wisconsin is known the world over as a great dairy state. Why? Simply because we have turned towards dairying and put all our aim and efforts towards the dairy cow. We have adopted her as a co-worker on our farms. We have studied her from the tip of her horns to the last hair in her tail. We have so thoroughly studied her makeup so that by the looks of her head, body, milk veins, and udder, we can nearly tell whether she is a good cow or not. We have studied her farther than that. We now know her ancestors by heart for twenty-five years back. We have built splendid homes for her, equipped these homes with the latest conveniences, carpeted the floors and polished the ceilings and every day have given her

a manicuring and shampooing from head to foot. In many cases we are now testing her out and humanity is living with her in her stable, stuffing her for five hours and every sixth hour milking; yes, in many barns cows are milked three and four times every twenty-four hours. Every detail about the dairy cow has been so closely studied through farm papers and our Agricultural College—talked, argued, and discussed at Farmers' Institutes. The dairy cow tells us and shows us that the corn crop canned and dished out as silage is one of the best breakfast foods. Silage is not a balanced ration. The milk pail tells us that a homemade "sandwich" of alfalfa hay and corn silage makes a balanced ration. Thousands of farmers in Wisconsin have the dairy cows and the silos, but only a few have enough home grown alfalfa to make these "sandwiches." Wisconsin is the greatest dairy state in the Union and has over 1,500,000 dairy cows within its borders. In 1917 we raised only one ton of alfalfa hay to every seven dairy cows or four tons of alfalfa to every silo. We raised 15 tons of clover and timothy to every ton of alfalfa. Good clover hay with silage makes a fair sandwich, but timothy hay makes a poor sandwich and your stock soon shows what kind of sandwiches you are feeding them.

These figures and rations are amazing. Something must be done at once. I now realize why our mail at Cornfalfa Farms is loaded down with so many inquiries for alfalfa hay, reading something like this: "I need 75 tons of alfalfa hay and my neighbors can use ten times that amount. How much can you furnish or where can we get this alfalfa hay?" Why do we face an alfalfa shortage? We have the people and soil but we have not adopted alfalfa as a co-worker. The alfalfa plant can be made to grow on every farm. What we need to know is how to grow and take care of it. Every farmer who is interested in growing alfalfa should join the Alfalfa Order and secure the eighty page booklet which this Order has just issued. It tells the plain truth about alfalfa in both story and pictures in such a way that everyone will understand. The time has come when no more free land can be grabbed and we must dig deeper for the fertility that lies underneath our farms. This reminds me of Ben Franklin's maxim:

Plow deep while sluggards sleep,
And you will have corn to sell and keep.

And I say the new proverb should read:

Plow deep while slackers sleep,
And we will soon have the Kaiser beat.

The world has turned toward America to plead for help in order to save its people from the ravages of militarism. We have entered this terrible world-wide war with the determination never to let up until we have accomplished our aim in forever abolishing militarism. American agriculture must supply enough food not only for our armies, but also for the armies of our Allies. That means larger yields on every farm, and larger yields means better farming. The Badger farmers can produce the highest yields and standards of foodstuffs in the least possible time by playing the alfalfa game correctly.

The things that alfalfa does for us on Cornalfalfa Farms it will do anywhere in Wisconsin if you adopt the slogan we did years ago: "Get engaged to alfalfa," and soon you will be the proud owners of two and three crops of alfalfa a year. Alfalfa in the summer time is like milling bran in a flour mill. It gives us more and better feed and that means stock will be in better condition. Our markets call for the best quality of all kinds of live stock. It is essential that the cost of production be reduced to the lowest point and no other feed with a high protein content can be produced as cheaply as alfalfa. This crop is worth all you can get for it, but it gives the best returns if fed to live stock on the farm. A combination of corn silage and alfalfa hay forms a feeding stuff for dairy cows which cannot be excelled by any other feed. It increases the rapidity of growth in young animals and insures a greater milk production. Alfalfa speeds up everything we must produce quickly. It is simply a problem of addition: "More alfalfa, more production."

We have on our program Mr. Fred Hatch from Spring Grove, Illinois, who has had many years of experience in growing alfalfa and who will discuss in detail the methods used in growing alfalfa successfully.

Before closing, I wish to call your attention again to the alfalfa booklet which has just been issued. Follow its instructions and you will have no difficulty in getting a good stand and raising several crops of alfalfa each year. This booklet should be in the hands of every alfalfa grower in Wisconsin.

MORE AND BETTER FEED FROM FEWER ACRES

L. F. GRABER, Secretary Alfalfa Order

It is a pleasure to come before you again at this—our sixth annual meeting. We organized in 1911 to build on a permanent and lasting basis a great alfalfa industry in the state of Wisconsin. And for what purpose more worthy and for what cause, more patriotic, could an organization stand for in the light of the present crisis.

Alfalfa is our biggest and best feed producing hay and surely, the growing of more alfalfa where it can be produced successfully is true patriotism in the strictest sense of the word. If there is any crop, which we can call unpatriotic in a time like this, it is that soil robbing, that poor producing, feed-less crop, timothy. It is true, that timothy seldom winterkills and that there are conditions where timothy has its place but as a general proposition we cannot afford to fool around with a crop that produces so little, that gives us such meager returns for our labor and our effort as does timothy.

“MAKE EVERY SEED, EVERY SECOND AND EVERY CENT, COUNT”

David Rankin of Tarkio, Missouri, was the wealthiest farmer in the world. His motto has the same significance today as it did in making his career the wonderful success it proved to be. It was this: “Make every seed, every second and every cent count.” Are we making every seed, every cent and every second count when we use our high priced farm land, our high priced farm labor to grow and harvest such an inadequate feed as timothy hay?

We may say it requires more labor to grow and harvest alfalfa and labor is scarce. That is true. It does take more labor to

handle thirty acres of alfalfa than it does thirty acres of timothy. But there is another way of looking at it. Supposing to winter the stock on a farm has required fifty tons of timothy hay which was produced on thirty acres of land. Would it not be far more profitable, from the labor standpoint, to secure fifty tons of hay with alfalfa produced on only fifteen acres of that same land? If labor were scarce we could turn the remaining fifteen acres into pasture and it would be clear profit.

We are not making every second of our labor count when we put our high priced farm help at harvesting such an insufficient feed as timothy hay. It requires just as much time and effort to load a ton of alfalfa hay as it does a ton of timothy and when you haul a ton of alfalfa hay in your barn you have there twice the amount of feed and twice as good a feed for the same labor as would be required for a ton of timothy.

More feed from fewer acres is one way of solving the labor problem and increasing food production at the same time. Alfalfa hay which today is worth from \$30.00 and \$40.00 a ton—think of it—from one and a half to two cents a pound—surely with this crop we can “*make every seed, every cent and every second count.*”

WINTERKILLING PROBLEMS

Since our organization began we have bent our energies in a common sensed encouragement of more alfalfa growing in Wisconsin by enlisting the cooperative efforts of our members in solving those problems which have heretofore limited the alfalfa acreage of this state. And it has not all been “sunshine and roses”—for there are real problems in growing alfalfa which confront us today. Not the least of these is that of *winterkilling*. It has caused severe losses with both clover and alfalfa. Late fall cutting and pasturing have ruined many a good stand of alfalfa but even fields which were not pastured or cut late in the fall have succumbed to the rigors of severe alternate freezing and thawing winter and spring weather. Where this occurs there is only one solution of the difficulty—and that is to use only the seeds of the hardiest known varieties.

GRIMM MAKES SHOWING

Our Association has already distributed for experimental purposes to several hundred of our members, the Grimm variety of seed. One hundred five-pound samples of Grimm were sent out in 1916 for comparison with common alfalfa. While this test has so far passed through only one winter already visible evidences of the superiority of Grimm alfalfa have been reported by thirty-two farmers. Here are a few of the statements made.

Grimm is fine. Common is almost an absolute failure."

"Grimm plants are larger and stronger."

"Grimm has a dark, strong green color. The common is a light green. I can see difference 80 rods away."

But Grimm alfalfa is expensive. It costs from 40 to 50 cents a pound. This year we are going to try out a plan which may effectually reduce the price of Grimm alfalfa seed from ten to fifteen cents a pound without reducing its winter resistant qualities.

TRY OUT TURKESTAN IN MIXTURE

The plan is to mix the Grimm seed half and half with Turkestan. *Understand that we do not recommend this as a general practice for it is as yet in the experimental stage but we do recommend that every member of the Alfalfa Order who will seed alfalfa next year should try out at least a limited amount of pure GRIMM and a limited amount of a half and half mixture of Grimm and Turkestan along side of whatever other kind of alfalfa seed they may desire to sow.* This is an experiment which requires no extra time or labor and that it is of vital importance we shall see.

Where Turkestan Seed Comes From

Approximately one-fifth of the alfalfa seed sown in this country comes from abroad and of this quantity 95 per cent comes from Turkestan. Seed from Turkestan can be imported at a lower cost and price than seed from any other part of the world. In spite of its cheapness it has not been very popular in the middle West or Eastern states. The United States Department of Agriculture has not endorsed it. It is criticized because of its

tendency to produce a rather scant third crop and rarely a fourth crop.

In southern Illinois, Kentucky and other states with long seasons where alfalfa may produce four to six crops a year, it is said that Turkestan alfalfa seed because of its cheapness has been sold to farmers as Common American grown seed. When it produced only two good crops and a fair third crop instead of the four and five good crops they were accustomed to obtain, it resulted in a storm of protest through the agricultural papers which made Turkestan alfalfa very unpopular.

Our Experience With Turkestan

In 1913, we were offered ten thousand pounds of very fine, clean, high germinating Turkestan alfalfa seed at \$6.60 a bushel. Our Association was then buying Montana, Dakota, Nebraska and Kansas grown seed for experimental purposes. The Montana seed cost us \$10.50 a bushel. Our members wanted Montana so we bought it. We turned down the cheaper Turkestan because of the unfavorable reports we had read and particularly the warnings of the United States Department of Agriculture on imported seed.

However, we bought a few pounds to include it in our experimental plots. Here we met a real surprise. The Turkestan plot came through the first winter in excellent shape as did the Montana, Kansas, Dakota, Nebraska, Grimm and Baltic plots seeded at the same time. Yields of the first two cuttings of Turkestan were somewhat higher than the common Western grown strains but the third crop was much shorter and yielded less hay than the others. In spite of abundant fall rains the Turkestan only grew an inch or two after the third cutting and soon turned brown while the Montana and other common varieties made a green fall growth of eight to ten inches.

As we will all remember, the winter of 1915-1916 was very severe and resulted in a most serious winterkilling of alfalfa and clover fields known in this and other states. Much to our surprise the Turkestan plot come through this severe winter without any serious injury and was almost as good a stand as the Grimm while the Montana plots killed out from 40 to 76 per cent. This, to us, was remarkable. The seed which we could have bought at \$6.60 a bushel proved much hardier than the higher priced Montana strains.

A Farmer's Experience With Turkestan

I was on the farm of Mr. Fred Dettwiler of Monroe, Wisconsin last July. He took me to an alfalfa field of about ten acres which was six years old. Up to a certain point on one side, the alfalfa had been practically all killed out last winter and was mostly blue grass. The remainder of the field came through in good shape.

"What makes the difference?" he asked me. "I don't know" I replied, "but did you use the same kind of seed for the entire field." "Yes, I did," he asserted, "but the part which has killed out was sown with some Montana I had on hand from the year previous while the remainder of the field was seeded with seed that I bought as Montana alfalfa seed that same spring."

The situation was rather puzzling. "Did you ever notice, Mr. Dettwiler, that this part of the field which has not winter-killed always has made a shorter third crop and a much shorter fall growth than the alfalfa which has killed out so badly?" I questioned. "I certainly have noticed that very plainly," he replied, "and I have often wondered why it was that this alfalfa which has winterkilled so badly would grow from five to ten inches higher in the fall than the rest." This statement threw some bright light on the problem. "Mr. Dettwiler," I said, "The only explanation I can give you is that this short fall growing alfalfa which has come through the winter in such good condition has acted just like the Turkestan variety, while the alfalfa which winterkilled was, in all probability, the real common Montana strain. It is apparently, a very good illustration of the greater permanency and lasting qualities of the Turkestan compared with the common American variety."

These illustrations are given to show the hardiness and lasting qualities of Turkestan alfalfa but I again wish to emphasize that with us, Turkestan is still in the experimental stage especially because of our lack of information as to the climatic conditions under which the seed was raised. But it is observations like this which we feel warrant a thorough state wide trial of this variety.

Importations Cut Off Due to War

It seems that importations of Turkestan from abroad have been cut off on account of the war. At least there is little

Turkestan available in the United States at present and the price has gone up considerably. Our supply is limited but we will have sufficient to make a good thorough test. Probably millions of pounds of Turkestan seed have accumulated over in Turkestan and when the war is over it may be obtainable at a very low figure. When that time comes we ought to know fully the true value of the Turkestan.

Do Not Recommend Turkestan Alone

We do not advise sowing pure Turkestan seed because it produces a rather poor third growth but we do believe that this difficulty can be satisfactorily overcome by mixing Grimm half and half with Turkestan.

Reasons for Mixing

First, we think that the mixture of half Grimm and half Turkestan may prove almost as hardy, productive and capable of living through hard winters, which kill out common alfalfa, as pure Grimm.

Second, the mixture should make a good third crop in average years.

Third, it costs less. The mixture of half Grimm and half Turkestan will cost from ten cents to fifteen cents a pound less than pure Grimm.

Fourth, less seed is required with a mixture of Grimm and Turkestan because the plants of both of these varieties have more widely spreading crowns and roots than the common. We believe with good favorable soil conditions and preparation sixteen pounds an acre is sufficient. Where alfalfa is grown for the first time or is not easy to grow, it is better to use twenty pounds an acre—especially if weeds are unusually abundant.

Avoid Mixing Grimm with Common

We do not advise mixing Grimm with common ordinary alfalfa because the Grimm seed coming from out West is more or less crossed anyway by insects with common alfalfa growing in the same vicinity as the Grimm fields. Common alfalfa is more easily winterkilled than either Grimm or Turkestan, therefore, let us not spoil our Grimm by mixing it with the less hardy common. Turkestan with us has proven hardy and if mixed

with Grimm a good third crop should be obtained in average years which is not generally possible when pure Turkestan is grown. Surely this mixture is worth trying out.

Here Are Our Plans

We hope to have the cooperation of every member who will sow alfalfa this spring in testing out this Turkestan mixture and the Grimm. We will send at prices quoted either eight or sixteen or twenty-four pounds of pure Grimm and (with good soil preparation, enough for one-half or one or one and one-half acres) and eight, sixteen or twenty-four pounds of a half-and-half mixture of Grimm and Turkestan. Everybody ordering seed must take both kinds in any amounts above specified. We will send the seed by parcels post or express prepaid, furnish all sacks and pay all shipping expenses. All orders for seed to conduct this experimental test must be sent in before March first.

How You Can Tell Turkestan

While Grimm and common American grown alfalfa seed cannot be distinguished one from another, the Turkestan can generally be quite readily identified by the character of the seed. It either has a rough surface or a dull grayish-appearance depending upon, whether or not it has been polished. You can generally tell the difference in the roughness of imported Turkestan and Grimm or common by rubbing the seeds between your fingers. Turkestan practically always contains the ivory white seeds of Russian Knapweed which are seldom found in alfalfa seed of any other variety. They are considered harmless under our conditions.

Purity of the Turkestan

We must bear in mind that there are good and bad grades of Turkestan seed. It generally always has a good germination but the best grades will very often have just a trace of buckhorn weed seeds present. If we felt that a slight trace of this weed seed in alfalfa would cause any serious difficulty we, of course, would not be instrumental in making our proposed distribution. However, we have sown this variety containing a trace of buckhorn seeds, time and again, without ever having

found buckhorn plants appearing in the field. When buckhorn seeds are present in such very small quantities we have no fears or worry in sowing high grade Turkestan seed especially when mixed half and half with clean Grimm seed.

Adulteration Not to Be Encouraged

We do not wish to encourage adulteration or mixing of seeds by seedsmen. We believe that the farmer should do his own mixing if any should be done. Fortunately, the harmless ivory white seeds of Russian Knapweed which are practically always present in Turkestan seed makes it possible to identify this seed in a mixture or otherwise.

KANSAS SEED AS GOOD AS MONTANA

In 1914, our members very gladly cooperated in trying out Kansas grown alfalfa seed in comparison with the more expensive Montana alfalfa. These tests have now passed through three winters—that of 1915–1916 being very severe. The reports received give very strong evidence that there is little or no difference in the hardiness and yields of Montana and Kansas grown alfalfa seed. Of 114 reports only fourteen felt that the Montana stood the winters better than the Kansas. One hundred declared they could see no difference between these two strains.

These results coincide exactly with our experiments on the Station Farm. The Kansas alfalfa with us has proven in every test to be as hardy, productive and satisfactory, in every respect, as the more Northern grown alfalfa seed. This applies equally well with the Dakota and Nebraska grown alfalfa seed. This is information of vital importance. It will save thousands of dollars in the purchase of alfalfa seed, as Kansas is the largest alfalfa seed producing state in the Union and seed from there can be generally obtained at a lower figure than from any other American source.

Location Where Seed is Grown not as Important as Variety

It is quite clear that as far as hardiness is concerned, the variety of alfalfa is of far greater importance than place of growth. We do not wish to say that common alfalfa seed grown

in Arizona or New Mexico is as hardy as that produced in Kansas or Montana for our experiments with seed produced farther south than Kansas would not as yet warrant any conclusions. But it is plainly evident that such distinct varieties as the Grimm, Baltic and Cossack have an inherent hardiness, whether grown in Idaho, Kansas or Montana which make them capable of living through hard winters that kill the common ordinary alfalfa in Wisconsin which may come from seed grown in these same states.

INOCULATION CULTURES SUPPLIED BY ALFALFA ORDER

Our Association this year will supply fresh and pure bacterial cultures for inoculating alfalfa and soy bean seed. These cultures are carefully prepared by the Agricultural Bacteriology Department of the Wisconsin College of Agriculture in aere sized bottles. They will be furnished postpaid at cost price of twenty-five cents a bottle which is sufficient for treating twenty pounds of seed. Members are requested to report their experiences and success with these cultures.

OUR NEW BOOKLET "ALFALFA"

The wealth of information on alfalfa which our Association has collected during the past six years together with the experimental observations on over 600 plots of alfalfa which we have established is of such great value and importance, that your Secretary has written an eighty page booklet telling of the experiences and experiments of our members. It is written in story form and illustrated with twenty colored views and over forty other illustrations. These views talk. They tell the plain truth about alfalfa. Professor Moore says it is the best, most attractive and interesting publication on alfalfa he has ever seen. Peter Swartz, our president and the largest grower of alfalfa in Wisconsin says that every farmer should have a copy. It is an expensive publication and cost us lots of money. We are making a special price of 50 cents per copy for our members. Those who are not members may secure single copies for 70 cents and in quantities of ten or more copies at 50 cents each. The booklet is published by the Alfalfa Order. All the funds are handled by the Association—not individually.

JOIN WISCONSIN'S ARMY OF ALFALFA GROWERS

For the past three years our membership has not fallen below 800. We have at present over a thousand members. The Alfalfa Order is a mighty army of alfalfa growers, truly patriotic in the cause of greater food production. Since we began in 1911 our alfalfa acreage has doubled twice over.

WISCONSIN'S ALFALFA RECORD

In 1915 the United States Crop Bureau of Statistics credited Wisconsin with a larger tonnage production of alfalfa hay than any other state east of the Mississippi river. Our production in 1915 was 361,000 tons—more than seven times that of 1909. This is only an indication of what a good strong and live Association can do.

Help This Movement Along

Let's pull together on alfalfa and profit by each others experiences. Join the Alfalfa Order. With all the benefits and advantages we have to offer our members there is only one thing to do—be a member. Do it now.

ALFALFA PROBLEMS IN NORTHERN STATES

BY FRED L. HATCH

A physician once prescribed "animal food" for one of his patients. Calling to see him some days later, he was anxious to know how he was doing and what benefits he had derived from the new diet. He was informed by the patient that he was "getting along pretty well," that he did not mind the barley, oats and corn, but "durn" the hay.

This was probably before the days of alfalfa or before its wonderful properties were known or the many ways in which it could be made to serve the wants of man and beast. I suppose the hay referred to by the sick man was just common every day timothy, deficient in protein, the food element which makes blood and bone and muscle and gives to all strength, vigor and energy. No wonder the system revolted at so much carbonaceous food, and demanded a more balanced ration. Had the patient been given alfalfa instead of timothy there would have been no balking at hay.

The wonderful and marvelous stories of the plant have sometimes appeared to us much like plain, common everyday lies. We have laughed at what we conceived to be clever exaggerations. It is just beginning to dawn upon us that we have been amused at facts and truths and that those whom we have taken for worldly minded humorists are in reality great truth-tellers.

We are facing a crisis such as the world has never known, and we are called upon to produce more and waste less, in order that freedom may not perish from the earth.

Already:

"Our Tuesdays are meatless
Our Wednesdays are wheatless
We're getting more eatless each day.
Our homes they are heatless
Our beds they are sheetless
They're all sent to the Y. M. C. A.

"Our neighbors are treatless
Our coffee is sweetless
Each day we get poorer and wiser.
Our stockings are feetless
Our trousers are seatless
My Lord! How I do hate the Kaiser!"

The prominent and everlasting problem in maintaining high production is to keep enough nitrogen in the soil out of which to make crops and because of this the leguminous crops are the fundamental basis of high production. Feed the legumes to the soil and the soil will feed the grain crops. If there is one thing above another which should be protected by the state it is the soil. No man should have the right to destroy his farm, no man should have a right to "skin" his farm, butcher it up, and sell the hide, hoof, bone and tallow. Such a man is not a farmer but a veritable robber and should be brought to speedy justice for his sins. The man who causes one blade of grass to grow where two grew before has forfeited his title to God's broad acres, and will soon pay the penalty by being forced into some city sweat shop. To feed the world and at the same time add to the fertility of the soil is his, the farmer's, problem.

We have the plant—alfalfa is preëminently that plant. It gathers large quantities of food from the air. Its roots drill down ten to twenty and even thirty feet, getting nourishment where other plants cannot reach. It is a comparatively new crop in the United States, but it is as old as the nations of Western Asia. When our forefathers came to this new world they brought with them this unique plant and in Virginia, New York, and parts of New England Lucerne was recognized as a valuable crop, but new and fertile soils would produce crops without food from the air and the use of this soil enricher was neglected. Now barren wastes have followed in the wake of this neglect. Had they recognized the importance of this wonderful plant as we are beginning to do, those barren wastes would now be fertile fields.

Alfalfa feeds our soils and enables us to grow larger crops of grain.

Alfalfa balances all grain rations, especially corn.

Alfalfa supplies us with protein more cheaply than we can buy it in feedstuffs.

Alfalfa produces double the feed value of clover or any other

forage crop per acre. Don't farm without it and don't feed without it.

Hon. A. P. Grout of Illinois, president of the first alfalfa association of America, said that he could pay 6 per cent on \$1,000 per acre land by growing alfalfa—that one acre of alfalfa was worth 6 acres of timothy and that when corn will net \$15.00 per acre alfalfa will net \$50.00 per acre.

Further proof of its value is shown in the following experiments.

In Wisconsin we notice that alfalfa produces twice as many tons per acre as clover or timothy. In 1910 the cost of growing alfalfa was about the same as growing other hay crops, which left a profit of \$4.00 on timothy and clover but \$21.00 on alfalfa per acre. This same year there were 50 million acres of timothy and clover and 5 million acres devoted to alfalfa. Only 218 thousand acres are east of the Mississippi river, Kansas raising 1 million acres—one-fifth of the entire acreage of the United States.

In Nebraska several litters of pigs were separated into two lots; one lot was put 80 days on corn and alfalfa pasture then were fed on corn and alfalfa hay 100 days. One lot was fed on corn alone with plenty of good water, the same as the other. Six months later these pigs were killed. The ones having corn and alfalfa averaged 185 pounds each, and the ones having corn alone 75 lbs. each. The ones having corn alone requiring 17 $\frac{3}{4}$ lbs. of corn for each pound of gain; the ones having corn and alfalfa required 5 $\frac{97}{100}$ lbs. of corn for each pound of gain.

"Time comes when each acre must yield without flaw
Production must double in Nature's grim law.
The cities will teem with vast millions that toil,
And life with its hopes must depend on the soil.
What methods more wise could the farmer combine,
Than raising alfalfa and fattening swine."

The Illinois Experiment Station conducted an experiment feeding dairy cows. The cows were divided into two lots; Lot I was fed for 9 weeks on alfalfa, Lot II on bran. They had other feeds too, but in similar quantities. At the end of 9 weeks the feeds were changed. When Lot II was fed alfalfa, the milk yield rose from 460 to 520 lbs. The total milk production for the 18 weeks shows a balance of 375 lbs. in favor of alfalfa feed

At the Nebraska Experiment Station a number of calves were divided into 2 lots. Lot I was fed prairie hay and grain (prairie hay has the same feeding value as timothy). Lot II was fed on alfalfa and grain. To make 1000 pounds gain required 16,700 pounds prairie hay vs. 10,000 pounds alfalfa; 3,000 pounds grain vs. 1,600 pounds of grain. The money cost for prairie hay and grain was \$45.10, and for alfalfa and grain was \$28.20.

Ontario, Canada, furnishes an experiment of how alfalfa enriches the land. Wheat planted after alfalfa yielded 61 bushels per acre, as compared to 42 bushels on timothy sod.

To grow alfalfa we must have well-drained, sweet soil. Many of the soils in Wisconsin and northern Illinois are naturally well-drained, being underlaid with loose limestone and were formerly all sweet soils. Many years of grain growing have exhausted the lime in the surface of the soil, so that from 2 to 5 tons of lime per acre must be applied before alfalfa can be grown most successfully. A well-prepared, firm seed bed, free from weeds is the next requisite, the young alfalfa plant being very delicate. All alfalfa land should be inoculated with nitrifying bacteria. We can do this by spreading soil from an old alfalfa field or sweet clover patch upon our seed bed, and immediately harrowing to hide bacteria from sun.

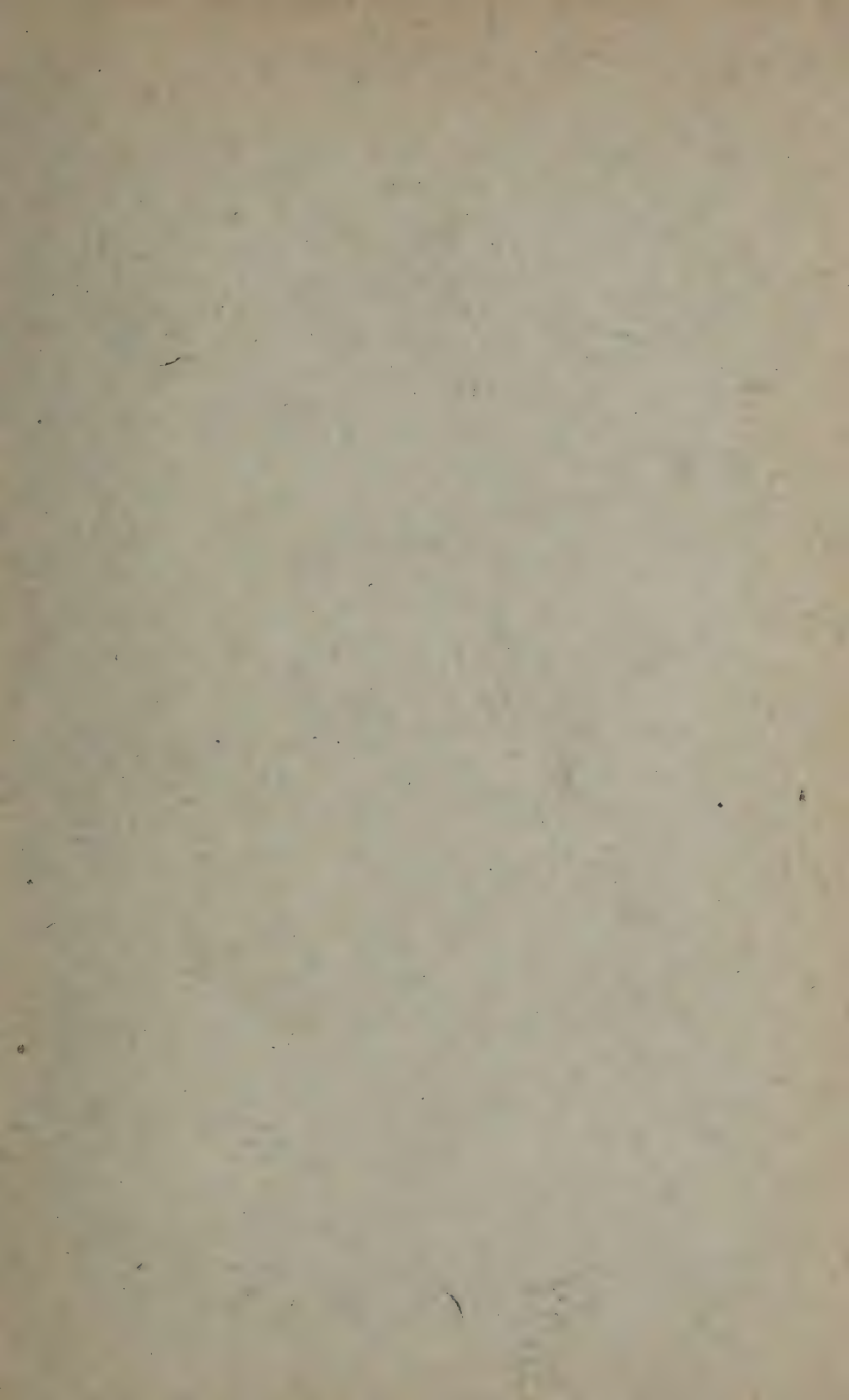
The better and less expensive way is to use a very weak solution of glue. Sprinkle lightly over the seed in a shady place, then with a fine sieve sift a very small quantity of dirt taken from near the roots of sweet clover or alfalfa that is known to be inoculated. You can tell whether or not the plants are inoculated by the little nodules that grow on the roots early in the season.

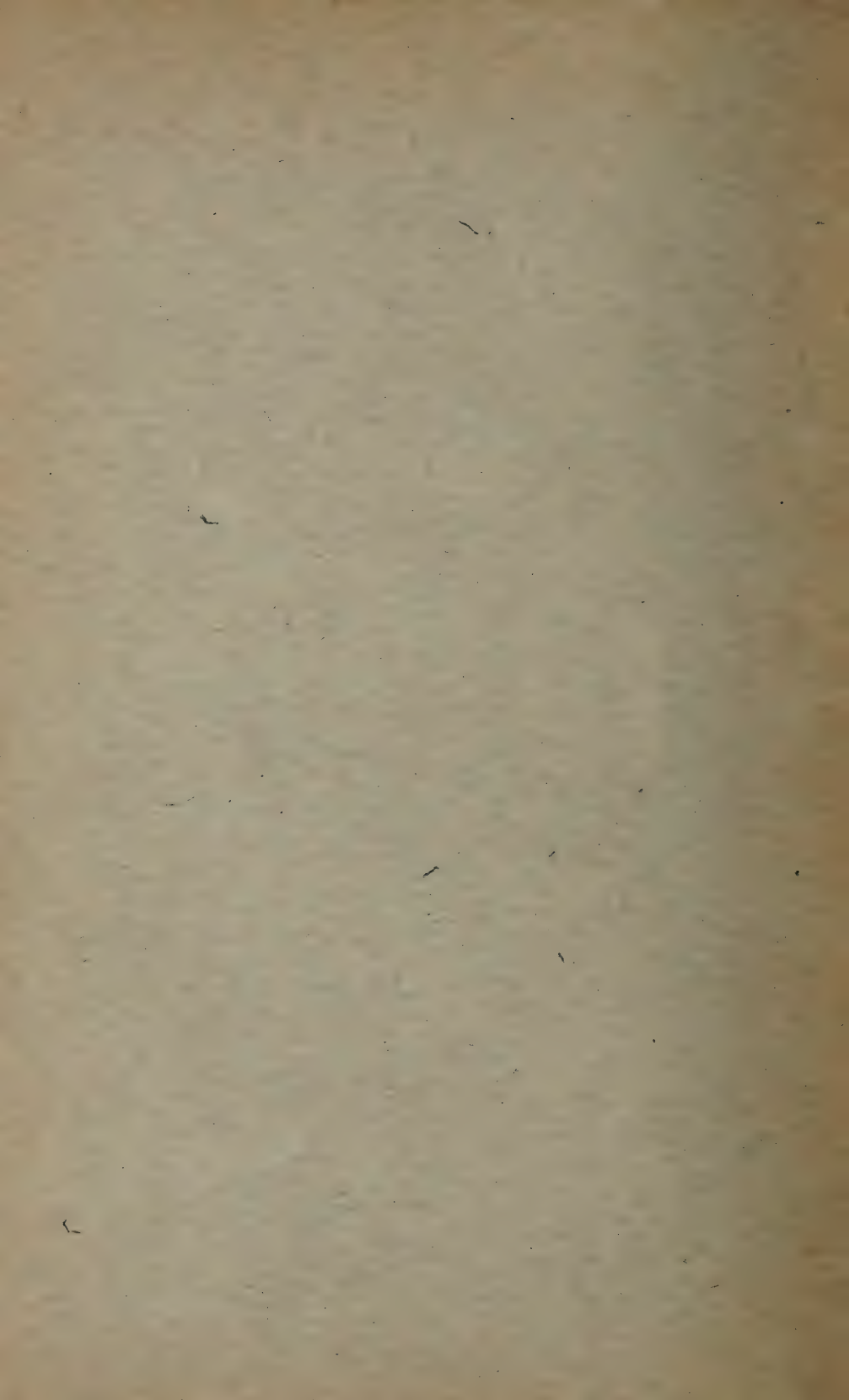
When alfalfa is ready to cut it will generally show more or less bloom, but the thing to watch is the starting of the second growth. When the new shoots at the crown or base of the plant are about 1½ to 2 inches high is the time to cut. Set the mower high enough so as not to clip off the tops of these shoots. If cut earlier you are likely to weaken the plant and lose growth on the first crop. If you cut later you are likely to cut the new shoots and thus retard the growth of the second crop. Be careful not to cut too late in the fall. There should be a growth of at least 8 inches high left to protect the crowns of the plants in the winter. At times no shoots appear and no blossoms, the lit-

the plants being rusty or sickly. It is best at such times to cut the plant and thus force it to make a new healthy growth.

Only nine per cent of the land left in this country is capable of being cultivated, hence we must have more intensive rather than extensive farming. We must make our present acres double our production in order to feed the world. All necessary information and instruction concerning culture and care of alfalfa may be had for the asking from our agricultural colleges and experiment stations.

In my opinion the wonderful plant, alfalfa, is to revolutionize agriculture, country life, country schools, country churches. It will transform poor, hilly country wastes into fields rich in plant food. It will enable the tenant to become the landowner. It drills into the earth and reaches up into the air for sunshine and food, which it transmits into cash for its fortunate owner. No other plant performs such enormous labors for the human race. It will solve the problem of high cost of living. Nature did a choice piece of work when she presented the alfalfa plant to the world. Doubtless she could have done a better job—but truly she never did.





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SEVENTEENTH ANNUAL REPORT

OF THE

WISCONSIN

Agricultural Experiment Association

WITH SIXTH ANNUAL REPORT OF

ALFALFA ORDER

Address of President, Secretary's Report With Papers and Addresses
Given by Members of the Association and Others Interested
In Progressive Agriculture.

COMPILED BY
R. A. MOORE, *Secretary*

MADISON, WIS.
DEMOCRAT PRINTING CO., STATE PRINTER
1918

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LETTER OF TRANSMITTAL

WISCONSIN AGRICULTURAL EXPERIMENT ASSOCIATION

MADISON, WIS., 1919.

To His Excellency, EMANUEL L. PHILIPP,
Governor of the State of Wisconsin:

Sir—I have the honor to submit for publication, as provided by law, the Seventeenth Annual Report of the Wisconsin Agricultural Experiment Association, showing the receipts and disbursements the past year, also outlines for experiments, and addresses and discussions given at the annual meeting at Madison, February 3rd to 8th, 1919.

Respectfully submitted,

R. A. MOORE,
Secretary.

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OFFICERS—1919

President.....	FRANK BELL, Columbus
Vice President.....	RUFUS GILLETTE, Verona
Secretary.....	R. A. MOORE, Madison
Asst. to the Sec'y.....	E. D. HOLDEN, Madison
Treasurer.....	PETER SWARTZ, Waukesha
Clerk and Stenographer	CLARA BRABANT, Madison

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Executive:

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J. R. THORPE.....	Beloit
A. L. STONE.....	Madison
J. B. CHEESMAN.....	Racine
JESSE VAN NATTA.....	Phillips
H. E. KRUEGER.....	Beaver Dam
T. H. CAMPION.....	Onalaska

Resolutions:

J. B. CHEESMAN.....	Racine
C. P. NORGORD.....	Madison
H. E. KRUEGER.....	Beaver Dam

Finance:

C. P. NORGORD.....	Madison
H. N. LONGLEY.....	Dousman
H. E. KRUEGER.....	Beaver Dam

Cooperative Experiments:

Farm Crops.....	R. A. MOORE
Soils.....	A. R. WHITSON
Farm Engineering.....	E. R. JONES
Agricultural Chemistry.....	E. B. HART
Agricultural Extension.....	K. L. HATCH
Farm Management.....	J. B. BORDEN

CONSTITUTION AND BY-LAWS

CONSTITUTION

Article I—Name

This organization shall be known as the Wisconsin Agricultural Experiment Association.

Article II—Object

The object of this association shall be to promote the agricultural interests of the state.

1st. By carrying on experiments and investigations that shall be beneficial to all parties interested in progressive farming.

2d. To form a more perfect union between the former and present students of the Wisconsin College of Agriculture so as to enable them to act in unison for the betterment of rural pursuits in carrying on systematic experiments along the various lines of agriculture;

3d. By growing and disseminating among its constituency new varieties of farm seeds and plants;

4th. By sending literature bearing upon agricultural investigations to its membership, and

5th. By holding an annual meeting in order to report and discuss topics and experiments beneficial to the members of the association.

Article III—Membership

Section I. All former, present and future students and instructors of the Wisconsin College of Agriculture shall be entitled to become members of this association.

Section II. Honorary membership may be conferred upon any one interested in progressive agriculture by a majority vote at any annual or special meeting of the association.

Article IV—Dues

A fee of fifty cents shall be collected from each member annually.

Article V—Officers

The officers of this association shall consist of a president, vice president, secretary, and treasurer, whose terms of office shall be one year or until their successors are elected.

Article VI—Duties of Officers

Section I. It shall be the duty of the president to preside at all meetings of the society and enforce the observance of such rules and regulations as will be for the best interest of the organization; to appoint all regular committees as he may deem expedient for the welfare of the association.

Section II. In the absence of the president, the vice president shall preside and perform all duties of the president.

Section III. It shall be the duty of the secretary to keep all records of the association; to report the results of all cooperative experiments carried on by its membership and the experiment station, plan the experimental work for the members of the association, and labor for the welfare of the society in general.

Section IV. The treasurer shall collect fees, keep secure all funds of the association and pay out money on the written order of the secretary, signed by the president. He shall furnish bonds in the sum of two thousand dollars, with two sureties, for the faithful performance of his duties.

Article VII—Amendments

This constitution may be amended at any annual meeting by a two-thirds vote of the members of the association present.

Amendment No. 1—Adopted Feb. 9, 1906

Any person residing within the state having completed a course in agriculture in any college equivalent to that given by the Wisconsin University, may become a member of this association under the same regulations as students from the Wisconsin College of Agriculture.

Amendment No. 2—Adopted Feb. 11, 1909

Any County Agricultural School within the state may be admitted to membership of the Experiment Association upon request by the principal of such school and the payment of an annual fee of \$1.00.

BY-LAWS

Article I. The officers of this association shall be elected by ballot at the annual meeting.

Art. II. The president and secretary shall be ex officio members of the executive committee.

Art. III. This association shall be governed by Roberts' Rules of Order.

Art IV. All members joining at the organization of this association shall be known as charter members.

Art. V. The time and place of the annual meeting shall be determined by the executive and program committees.

Constitution adopted and organization effected Feb. 22, 1901.

PRESIDENT'S ANNUAL ADDRESS

F. E. BELL, Columbus

To-day conditions are far different than one year or even six months ago, when the very air was charged with uncertainty and the last hour was no guide to what the next would be.

Peace with its multitude of problems is here, and while the world faces a shortage of protein foods and fats, we are almost certain to face an era of lower prices. However, there is no need of our worrying or feeling discouraged. Years of successful work that have placed Wisconsin first in acre yield of corn, barley, and oats and almost at the top with wheat has placed us in such a strongly intrenched position that nothing I can now imagine can or will affect us severely. A few short weeks ago every College, Normal School and University was a transplanted West Point and echoed to the tread of marching feet, while thousands of young men were fitting themselves to take the places as leaders of those who fell on the Field of Honor. However, that need is happily past and the S. A. T. C. are turning to things constructive instead of things destructive.

Our army of production must go steadily forward. Our Agricultural College is that army's West Point. Its students and our Experiment Association members must be its officers, ever striving for greater things if we are to live up to our past. There is reported to be a great interest in things agricultural among our soldiers over seas—that among them the Reports of our Agricultural College and Experiment Association furnish ninety per cent of the subject matter. Do these facts mean anything to our members? Decidedly,—an ever widening field, an ever widening interest and surely an ever widening market with resultant profits, which, after all, is what most of us are after, as very few pose as philanthropists and fewer of us are.

These things loom big in bringing that profit:

Good stationery with name of farm at the head.

A neatly gotten up price leaflet.

Prompt and truthful answers to inquiries,

“Typewritten preferably, but not necessarily.”

Quality always! Quality,

and a price that pays you for your extra care and trouble, because it is an *absolute fact* that what the average buyer pays well for he will do well by and with.

SECRETARY'S ANNUAL REPORT FOR 1918

R. A. MOORE, Madison

Members of the Executive Board of the Wisconsin Experiment Association:

It certainly is a great pleasure for me to appear before you at this annual meeting. It has been the pleasure of your Secretary to watch the growth of the Wisconsin Experiment Association with a great deal of interest, and to see it grow from a few members, looking out upon the horizon of advancement to see what was best to do, to a great working organization which makes its influence felt around the entire world. The great good that the Experiment Association has done in the way of growing and disseminating the pure bred seed grains has been worth untold millions to the state of Wisconsin and our country in general. It is the fond hope of your Secretary that this good work will still continue and that the Experiment Association will become more firmly established in the hearts and minds of the people of our state. There is a great work to perform, and we know the members of the Association are equal to the occasion.

We have had untold difficulties to surmount during the past two years. A large number of our members went into the country's service, and many others who would have come to the College of Agriculture and united with the Association also were taken from us. This has somewhat thinned our ranks, but with the return of our members there is no reason why the Association will not flourish as never before.

MEMBERSHIP

Our membership, notwithstanding the inroads made upon the same through the exigencies of war, has maintained itself very nicely, and at the close of 1918 we had a total of 1082 paid up members. There are nearly as many more whose membership fee has merely lapsed, so that we can estimate our membership at practically 2,000.

COUNTY ORDERS

The County Orders of the Experiment Association are established in 55 counties, and for many years have carried on exceedingly good work. During the past two years, with so many war measures on foot, there seems to be a waning of enthusiasm and active effort on the part of the County Orders. Surely there must be new life thrown into our County Order system in order to maintain it at the high standard it has previously held. Every member of the Association should throw his zeal and energy in behalf of the County Order. Find out immediately the officers and make helpful suggestions to them in regard to holding meetings and carrying on work for the year. Spring will soon be with us, and we desire to get busy upon the various lines of effort at the earliest opportunity. One of the special lines of effort for every County Order to take up is the holding of an annual meeting together with a grain show. This has helped to maintain the high standards of pure bred seeds to a greater extent than any other one factor. The keeping of a good grain exhibit at the Courthouse or in any public place where farmers can see the same, and the names of growers who have seed for sale, helps wonderfully. The taking of an exhibit to the State Fair also has been of great value, and it is hoped that the County Orders will again keep in close touch with the Commissioner of Agriculture and again exhibit at the State Fair.

The Jackson County Order has made a movement which could be carried out by other counties to good advantage. Jackson County has started the work of putting up corn curing buildings for the purpose of fire drying seed corn. This means wherever a corn curing building is put up corn will be cured in it from year to year, and Jackson County will soon become known far and near as one of the leading seed corn counties. This work should be emphasized and farmers encouraged as there is always a good demand for well cured seed corn. No seed corn should be put on the market unless it is properly fire dried.

Kenosha County also is putting forth efforts in the same direction but having each corn curing house serve several farmers, and we look forward to having several central drying houses for corn erected in Kenosha County the coming year. The Secretaries of the County Orders in many counties have also advocated

the putting up of grain storage buildings and many good granaries and facilities for handling pure bred seed grains on many of the seed farms. Fanning mills and grain graders have been put on seed grain farms.

Burnett County has put forth special efforts in the way of the dissemination of Wisconsin pedigree rye, and this work has been carried on to such an extent that nearly every farm in the county has the pedigreed rye placed upon it. Burnett County is going to be in a position to furnish rye to practically one-fourth of our entire state. It is sincerely hoped that other secretaries will take hold of work that will be of immense value to the farmers and push it to the utmost extent. Several of the County Orders have pushed very strenuously the growing of soy beans which means so much to people in the sandy regions of the state.

La Crosse County has led the state in its wide dissemination of pure bred seed. Farmers have been brought to feel that it is a disgrace to any longer grow the scrub grains upon their farms and the beautiful pedigree grains are grown everywhere.

Brown, St. Croix, Winnebago, Jefferson, and several other counties have put forth active efforts in the way of pushing the pure bred seed grain dissemination work. Their slogan has been "Pure Bred Seeds for Every Farm." This certainly is commendable, as the sooner we get the scrub grains kicked off the farms and replaced by pure bred strains, the better it will be for each and every farming community.

SEED GRAIN CANVASSERS

Each season sees the traveling salesman going about the country with fine samples of seed to show the various farmers and induce them to purchase. In nearly every instance they have nothing more than common, ordinary seeds to sell, which they do sell at an enormous figure, often selling oats from \$3 to \$5 per bushel. Many of our farmers invest in them simply because they do not really know the source of supply of our pedigreed seeds. They also are not aware of the fact that most of the Wisconsin pedigreed seeds have had from 15 to 18 years breeding work placed upon them and are far superior to any seed they possibly could purchase from a traveling agent. They would also be able to get the seed at about one-third or one-

fourth what it would cost to secure seed from the traveling salesman. I feel that much more publicity should be given to the pure bred seed grain work, and especially where it can be obtained.

SEED GRAIN LIST

The Wisconsin Experiment Association published 5,000 lists showing where the pure bred seed grains could be secured. These lists were sent to the county agents in various states as well as our own, and to public places. This method of advertising is about the only method that is taken up by the Experiment Association. It seems to me it is about the only method that we can use as we are a state association and cannot advertise as an individual. I feel, however, that our growers should put forth much more effort in advertising than they do. In looking over a copy of one of our leading farm papers of Wisconsin I noticed about 100 animal ads while there were only two ads of pure bred seeds. It seems to me this is out of all proportion, and I think that the members of our Association should make it a point to do more or less advertising. Many of the members of the Association should become a regular correspondent for their home papers and often write up little articles concerning the pure bred seeds in comparison with common varieties. This would attract attention at home and be instrumental in bringing in a good many orders near home. Three or four lines of advertising in a good agricultural paper would certainly show results that would pay.

SEED GRAIN INSPECTION

During the summer and a portion of the fall considerable effort has been put forth in the way of inspecting the seed grains in the fields and again after threshing so that the grains could be looked at while in storage. I feel that much more of this work should be done than what we are doing at the present time. It seems to me that wherever we have county agents acting as secretaries and managers of the County Orders that the responsibility of doing considerable of this inspection work should fall upon them. They could then be the source of supply, keeping their good grain growers listed, and the state association could merely refer orders direct to them and they could become the intermediary between the purchaser and the seller. We feel

that the success of the putting of pure bred seeds on every farm in the various counties rests quite largely with the county agent who acts as manager of the county order. He could furnish the names of his growers to go into the state seed list.

CONTAMINATED SEED GRAINS

Wisconsin has come through a trying period during the past year in the way of farm seeds. It was well that we had such an organization as the Wisconsin Experiment Association or we would have been in a very helpless condition. Members of the Association, notwithstanding the fact that 1917 was a poor year, had 75,000 bushels of pure bred corn which was sold for seed. This saved the day for Wisconsin and was one of the means of sending old Wisconsin forward to head the list in yield per acre of the corn growing states.

We did not fare quite so well when it came to supplying spring wheat. We desired to double our acreage, and in order to do this we had to secure some from outside sources. This wheat that was on the market as seed wheat was contaminated with mustard, wild oats, and quack grass. The Seed Inspector promptly prevented several carloads from coming in, and had other carloads rejected, so that on the whole very little contaminated seed was sown. We more than doubled our acreage, going from 146,000 acres in 1917 to 348,000 in 1918, which averaged 24.6 bushels per acre. This magnificent yield may be accounted for from the fact that over 50% of the crop was put in by using our improved Marquis seed wheat. Wisconsin will soon take her place as a wheat growing state.

FIELD AND CANNING PEAS

Another line of work we should emphasize is the growing and dissemination of select varieties of field and canning peas. Professor Delwiche at the Branch Station farms has improved several varieties, and these should be grown especially in the north where disease and insect enemies are unknown. Pea canning factories should be invited to locate in this region as I feel sure that northern Wisconsin is to become in the future the canning center of Wisconsin.

YOUNG PEOPLE'S CONTEST WORK

The Experiment Association is still interesting the young

people in this line of effort. Over 12,000 were engaged in corn work last year. The acre corn contest work will be especially emphasized this year. Corn and grain judging contests for the young people will be held at Madison at the time of the annual meeting next year.

CORN GROWING CONTESTS FOR FARMERS

Efforts will be put forth to interest farmers in increasing yields of pure bred corn per acre. Mr. Champion will have supervision of the work for the Association, and we look for good results. With the good work so well in hand there is no reason why 1919 should not be the banner year for the Wisconsin Experiment Association.

DISSEMINATION OF SORGHUM SEED

Owing to the sugar shortage of last year it was thought advisable to have two or three hundred of the members of the Association grow sorghum. The Association secured a supply of seed from one of the leading seed houses and made a dissemination of the same. Our growers carried out their tests very nicely, but unfortunately the seed secured was not pure and true to type. We find that it is necessary for Wisconsin to breed and disseminate her own seed. The Agronomy Department is now busily engaged, and has been during the past two years, in breeding sorghum seed that can be depended upon year after year in nearly all parts of Wisconsin. We desire to get a few growers of good sorghum seed, and will make another dissemination of seed the coming year.

SPECIAL OBSERVATIONS

From general observations made in past years we have found that our growers who specialize on one variety each of corn, oats, barley, wheat, etc., are more apt to keep the same pure and true to type than if they attempt to grow several varieties of corn and various grains. It is certainly very hard to grow several varieties of corn and keep them pure on a single farm, and we are up against nearly the same proposition when we attempt to do the same with oats, wheat, etc. We would, therefore, recommend to members of our Association that it would be well for them to specialize on a limited number of varieties. During the past three years the Agronomy Department has been

putting forth special efforts to improve those pedigreed varieties of seeds. Consequently it has now considerable quantity of what is known as select pedigreed barley, oats, corn, etc. This select strain has been taken and bred up from our older strains, and some were disseminated last year. More will be disseminated again this year so that members of the Experiment Association will have more highly bred strains of the same varieties than they have had in previous years.

CORRESPONDENCE

I very much desire at this time to call the attention of the members of the Experiment Association to the desirability of answering promptly all correspondence. We have found in several instances after a member of this Association had sold his pure bred grains he would not take the trouble to answer the correspondence. We feel that although it requires postage stamps and some effort on the part of the member to answer correspondence, yet he would be further ahead in the end if he attended to such duties properly. A brotherly spirit should exist, and does exist, between members of the Wisconsin Experiment Association, and if members would answer correspondence and after their supply of seeds is exhausted would refer parties back to the Secretary of the state association, it would lead to some other of the members securing an order. We hope that this will be religiously attended to in the future and no party will hereafter complain of writing to members of our Association and not receiving a reply.

ONLY GOOD SEED SHOULD BE SHIPPED OUT

No member of the Experiment Association should ever be guilty of sending out any seeds that are not of good standard quality. A single shipment sent out by a member of the Association would hurt the honor and good name of possibly hundreds of our growers. We have been very much pleased in the past to receive so many complimentary letters concerning the quality of the seeds shipped out by our members. However, we have received a few letters and samples of seed that have been shipped in the past that were not complimentary to the members of our Association. Nearly all of our members wish to do good clean honest work, and where we have a few members of the Associa-

tion that try to live on the prestige of the Association we find it is an injury to all concerned. Going into the seed grain business is not an expensive proposition, but there is some machinery necessary, some buildings to put up, and a few things that are essential on every well regulated seed growing farm. For money invested I feel there is no safer or quicker proposition to realize on invested funds than in the seed grain business. It only takes a few dollars to get started, and when we conceive of the enormous supply that is taken annually from our state we find it is one of the lines of agriculture that brings in enormous sums to be distributed among a very large number of people.

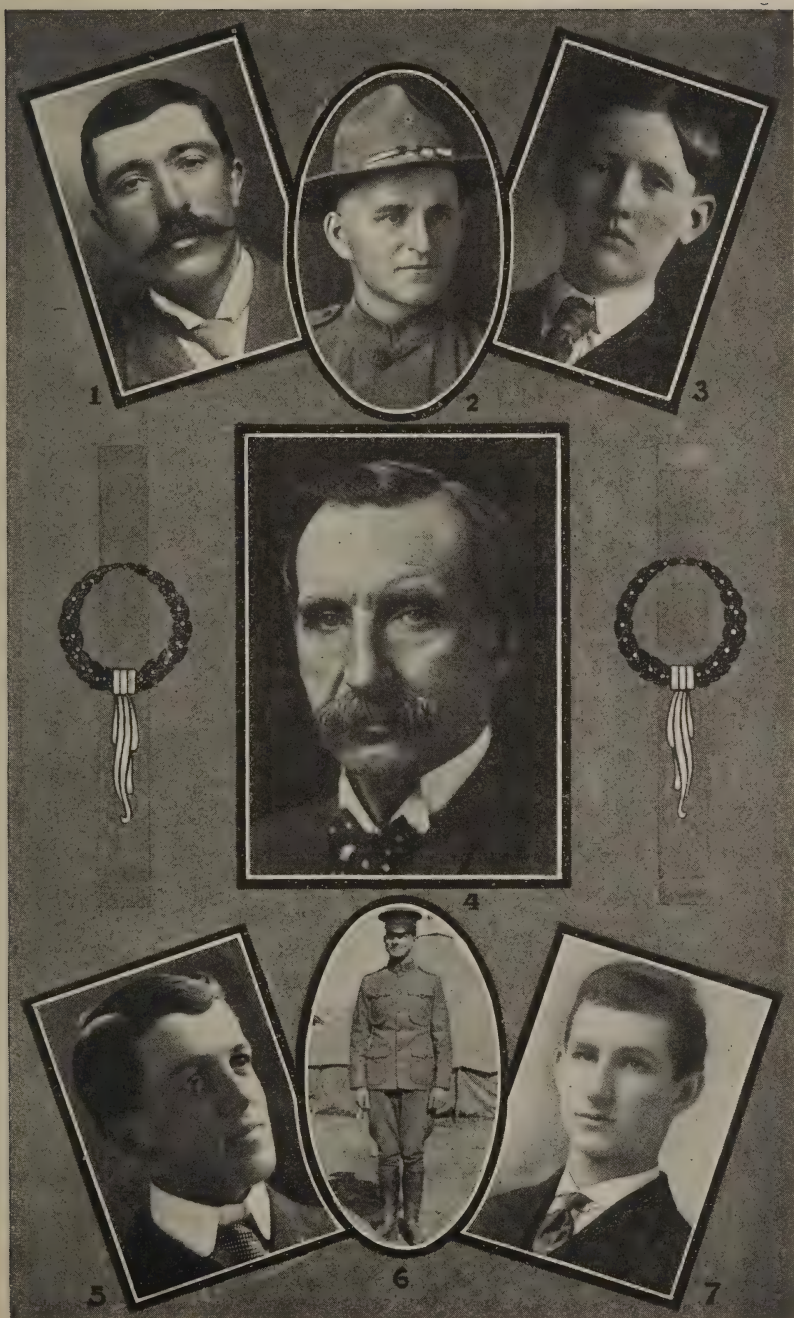
We hope with the sending out of the advanced pedigreed grains, and with the many new lines of work which will be carried on this year that the work of the Experiment Association will be more interesting, instructive and more profitable than ever before.

In Memoriam

During the past year the grim reaper made a deep inroad and secured a large harvest among the members of the Experiment Association. Not only was a claim made on pioneers and members who had been active for many years past, but also those who were in the prime of life numbered among the deceased members.

From many sections of the state came the report that a member in that section would no longer be with us. A number of the younger members made the supreme sacrifice in the service of their country. The deceased members were progressive and broad minded men who have rendered a useful service to the state in doing everything in their power to promote the agricultural industry. They were among the leaders in any progressive movement and the loss to the state through their death cannot be replaced.

The members of the Experiment Association and Alfalfa Order feel the loss of the co-workers keenly and wish to convey their earnest sympathy to the bereaved and sorrowing relatives.



1 HERMAN SCHOEN 2 JOHN SWARTZ 3 M. NOLTIMER
 4 HON. W. D. HOARD
 5 HARRY L. POST 6 KURT GRAF 7 CHARLES BURT

W. D. Hoard

Deeply do we regret to record the loss of Wisconsin's grand old man and foremost citizen, Ex-Governor W. D. Hoard, who died at his home in Ft. Atkinson, Nov. 22, 1918.

For many years he had been feeble in health although active mentally in his efforts for the betterment of Agriculture. He was an honorary member of the Wisconsin Experiment Association and Vice President of the Alfalfa Order since its organization in 1911. The keen interest which he manifested in pure bred seeds and crop improvement and his pioneer work in developing alfalfa growing in Wisconsin were second only in their effect to the splendid influence which contributed so largely and prominently in Wisconsin's progress and ultimate supremacy in the dairy industry.

Governor Hoard was a leader. His vision was broad, clear and comprehensive. He saw things in their entirety and the fruits of his work were magnanimous. He organized the Wisconsin State Dairyman's Association and the Northwestern Dairyman's Association. He was elected Governor of Wisconsin in 1888 and during his term of office he secured the passage of the law creating the Dairy and Food Commission.

He served as President of the Board of Regents of the University; President of the Wisconsin Board of Commissioners for the St. Louis World's Fair; President of the National Farmers' Congress and as a veteran of the Civil War was Grand Commander of the Wisconsin G. A. R. These honored positions reflect the confidence, respect and honor which the people he served tendered him.

Governor Hoard founded a great dairy publication, Hoard's Dairyman, and a local paper, the Jefferson County Union. His influence on agriculture was not only national in its scope but in Canada and foreign countries his work bore fruit and brought forth recognition of his powerful leadership.

Governor Hoard was born in Stockbridge, New York, October 10, 1836. He is survived by three sons, Frank, Halbert and Arthur and a daughter, Mrs. Paul Tratt; a sister, Mrs. Elizabeth McGinnis, and a brother, H. E. Hoard, of Montevideo, Minnesota.

The Wisconsin Experiment Association and Alfalfa Order were proud to number among its friends and supporters such a noble character as Governor Hoard and we mourn his inestimable loss. To his sorrowing wife, relatives and friends we extend our sincerest sympathy in their bereavement.

THE DEMAND FOR PURE BRED SEED GRAINS

H. W. ALBERTZ

Long before the history of man was recorded, it was known that the seeds of some plants were more productive than others, and that the good qualities of plants were transmitted to the progeny.

The American Indians recognized the value of careful selection of seed corn before the white man came to America. The work of selecting and storing the seed was religiously delegated to the oldest squaw who carefully selected the biggest ears of corn, dried them, wrapped them in pieces of skin and carefully stored the treasure until the following spring when the oak leaves had grown to be as large as a mouse's ear.

The early Romans also made various attempts to improve the yield and quality of field crops. Virgil, an early Roman writer who lived many centuries before Christ, says: "I have, indeed, seen many sowers artificially prepare their seeds, and steep them first in saltpeter and black lees of oil, that produce might be larger in the fallacious pods and though, being hastened, they were soaked over a slow fire, selected long and proved with much labor, yet have I seen them degenerate, unless human industry with the hand, pulled out the largest every year." It is clear that even in those early days attempts were made to stimulate the seed and increase yields. While the Roman idea has long been abandoned, we are still following the principle of selecting the best for further production.

In Scotland and in many of the other foreign countries it has for a long time been a common practice to build a stock from that part of the field where the plants were most vigorous and most productive and of the highest quality. This grain is kept by itself for seed after being well winnowed and cleaned.

THE SWEDISH SEED ASSOCIATION

These early attempts have led to the development of a new phase agricultural effort—that of systematic plant improvement

through selection and breeding. As early as 1886 an association called the Swedish Seed Association was organized at Svalof, Sweden, whose aim was to improve field crops under cultivation at that time. In many respects this association has laid the foundation for practical methods of crop improvement and is still rendering a useful service. The Swedish Seed Association owns forty acres of land which is used for experimental plots. On these plots the different varieties from all parts of the world are grown in competition with one another. As soon as a particular variety has proved itself worthy of dissemination, it is placed in charge of the Swedish Seed Company, a separate organization which sows the seed in large increase fields and sells it to the growers. While this association has not been able to fulfill all its aims, it has rendered valuable service not only to Sweden but also to other grain growing countries of the world.

THE CANADIAN SEED ASSOCIATION

The Canadian Seed Association is an organization very similar to the Wisconsin Experiment Association. It was organized three years later than our association and has made rapid strides in improvement of Canadian crops. The work of the Canadian Seed Association extends over the entire dominion. Each member is required to make hand selections each year. He is requested to grow several varieties in plots in competition for several years and then decide upon which variety he proposes to improve. Having decided upon the variety, the next step is to secure the very best and purest "Seed Stock" or registered seed of that variety. This or its progeny may be obtained either from an experimental station or from another member who has been operating for a number of years, and who has a supply of such seed on hand. He keeps the sort pure and multiplies it under the inspection and direction of the association. Where a pure foundation stock is not available the grower may proceed to grow such stock from the chosen variety. This is accomplished by operating each year a "hand-selected-seed-plot" from which is selected annually a sufficient quantity of typical heads, panicles, ears or pods to give enough clean seed to sow another plot the following year. This system, if properly worked out, has a tendency to keep the variety pure

and to improve the quality and yield of the crop because only the best plants are selected for seed every year.

After reviewing the work of other associations let us direct our attention to Wisconsin. Ever since its organization, the Wisconsin Experiment Association has been successful in its aims for two reasons, first because Wisconsin is especially adapted to raising pure bred seed and second, the members of the Experiment Association have exercised every effort to improve their field crops.

WISCONSIN PURE BRED SEEDS

The demand for Wisconsin seeds has been so great that during the past few years the members of the Experiment Association could not grow enough seeds to supply this demand. This is true especially of corn and soy beans.

Wisconsin is primarily a dairy state. With rare exceptions every farmer in the state is a general dairy farmer. The fertility of the soil is high because the manure is returned to the soil. A good system of rotation is followed in all portions of the state. Small grains usually follow a cultivated crop. This system enables the farmer to free his land from weeds especially wild oats and such other weeds which are very troublesome in regions where one grain crop necessarily follows another. The pure bred seed industry fits well into the dairy industry. The grower cleans his pedigreed grains well and sells them at an advanced price and feeds the poorer grains to his stock. If by chance he buys feed containing weed seeds he will encounter little difficulty in keeping grain fields free from weeds because manure which might contain weed seeds is hauled on corn land. This land receives several cultivations during the season so that the possibilities of noxious weeds are reduced to a minimum.

Wisconsin has also a wide variation in climate and soils. The growing season in the northern part of the state is several weeks shorter than in the southern part. The entire tier of counties along the shore of Lake Michigan have a much cooler climate than the counties in the same latitude in the western part of the state. The soil ranges from a light sand to a heavy clay. The greater portion is a rich prairie loam. This variation in climate and soil has led to the production of grains and corn especially adapted to peculiar conditions. Special varieties of

corn have been developed to meet the requirement caused by the difference in growing season. Three varieties of oats have been developed to meet the different soil conditions.

The members of the association have done everything in their power to grow the pedigreed grains and keep them pure. Very frequently have I inspected the fields of farmers during the summer of 1918 and have found that they would not offer any seed grain for sale if they had noxious weeds on any part of their farm. They felt that you can never be too sure that every weed kernel is removed and that it is better to be safe now than sorry afterward.

A large number of growers make a special effort to keep their seeds pure. They often supply their neighbors with pure seed free of charge in order to avoid danger from mixture from adjacent fields. Some of them give the neighbors a new supply of corn every year. The Association has developed several pedigree grain growers and several pure bred corn growers with a nation-wide reputation. There is room for still more members of this type to supply the needs of farmers in Wisconsin and outside the State.

DEMAND FOR BETTER SEEDS

During the past year there has been a greater demand for pure bred seed grains than in any previous years. This increased demand is due mainly to the efforts of the county agents and emergency food agents who did everything in their power to increase crop production. Many farmers who had heretofore never made an effort to grow improved varieties of field crops now did all they could to secure the best varieties. The average farmer is now aware of the fact that there are better grains than the scrub varieties and all he needs to do in order to secure the best is to make his wants known to the county agent. In the course of the next few years, pedigreed seed grains will be in demand more than ever before because their merits are better known from year to year. Many county order secretaries reported that they assisted in placing over one thousand bushels of pedigreed grains in the state. While a larger number of farmers are already growing the pedigreed grains, there is still room for more to grow them. According to 1917 statistics, Wisconsin corn acreage was 1,918,105; oats 2,250,744; winter wheat

93,262; spring wheat 145,535; barley 600,170; rye 409,890. Every acre of land should be sowed with the best seed. The corn acreage alone requires 319,684 bushels of seed. This means that in order to produce the maximum amount per acre the variety best adapted to the locality should be sowed.

With a yield of fifty bushels of seed corn per acre, it would require 6,373 acres to supply the demand of seed corn in this state. With the shortage of pure bred seed corn last spring, yields from less than 3,000 acres of the pure bred seed corn were reported to the office of the Experiment Association. While many farmers will perhaps be planting corn produced from varieties adapted to southern climates but which matured in Wisconsin last fall because we had a very favorable fall to mature corn, the growers will soon be looking for our standard varieties. The price of land in Wisconsin is too high to permit farmers to speculate with varieties which will mature only one year out of ten. Growers of pure bred corn will not make a mistake by holding that corn which they cannot sell this year over until next year.

There is no time like the present in getting started with pedigreed grains and no member of the Experiment Association can afford to fail to take advantage of present opportunities.

REPORT OF ASSOCIATION'S CO-OPERATIVE WORK

SOY BEANS

Two pounds of seed were sent to members in different parts of the state in the spring of 1918, with directions for planting, cultivating and harvesting. Inoculation was furnished with each lot. Twenty-four members reported the results of their trial.

The methods of harvesting were reported as follows:

- 9 members harvested the soy beans by pulling them by hand.
- 2 harvested with a corn knife.
- 3 harvested with a mower.
- 1 harvested with a mower and bunching attachment.
- 1 harvested with a navy bean harvester.
- 8 did not report on method of harvesting.

Up to the present time, the best method of harvesting is with a mower and bunching attachment.

EARLY BLACK SOY BEANS

The following method of planting was reported:

- 7 members planted them alone in rows.
- 2 planted in rows with corn.
- 1 sowed broadcast.

Reports on yield of hay were as follows:

- 1 reported 2 tons per acre.
- 3 reported 1 ton per acre.
- 1 reported $\frac{1}{2}$ ton per acre.

Most of the experimenters grow the soy bean for seed.

On clay loam soils, the average height of plants was 30 inches, while on sandy soil the average was only 20 inches.

ITO SAN

Reports from members indicate that the average height of Ito San soy beans was better than 30 inches and the yield was more than 2 tons of hay per acre. Even on jack pine sand, the average height was more than 2 feet. The Ito San yielded better than the Early Black variety, but were later in maturing and were injured by the frost in some of the counties in central Wisconsin.

MANCHU

Reports on the Manchu variety indicate that they are not quite as tall as the Ito San nor as short as the Early Black variety. They mature somewhat earlier than the Ito San. The average yield reported is more than two tons per acre.

Reports seem to indicate that soy beans are adapted to light soils and will take the place of leguminos crops, were clover fails. The quality of hay compares very favorably with that of clover.

TOTAL NUMBER OF ACRES OF EACH VARIETY OF GRAIN REPORTED AND AVERAGE YIELD PER ACRE

Variety	Acres	Av. Yield
Ped. Barley	1462	39
Any other Variety Barley.....	245	36
Ped. Oats, No. 1.....	1727	56
Kherson or Ped. No. 7.....	431	56
Any other Variety Oats.....	869	53
Ped. Rye	572	27
Any other Variety Rye.....	113	23
Ped. Winter Wheat.....	161	28
Marquis Spring Wheat.....	1052	32
Any other Variety Spring Wheat.....	351	25
No. 7 Corn	1028	58
No. 12 Corn	1335	62
No. 8 Corn	235	57
Clark's Yellow Dent & Murdock Varieties.....	756	58

LARGEST YIELD PER ACRE REPORTED

Variety	Total Production	Yield per Acre	Size of Field
Pedigree Barley	112½ bu.	90 bu.	1¼ A.
Pedigree No. 1 Oats.....	1500 bu.	100 bu.	15 A.
Pedigree Rye	300 bu.	60 bu.	5 A.
Marquis Wheat	168½ bu.	65 bu.	2½ A.
Wis. No. 12 Corn.....	1000 bu.	125 bu.	8 A.

ANNUAL MEETING OF THE WISCONSIN EXPERIMENT ASSOCIATION

Owing to the epidemic of Spanish Influenza, the program of the Annual Meeting of the Wisconsin Experiment Association was not carried out in full this year. The Executive Committee met and laid plans for the year. A report of their plans is found in this Annual Report of the Secretary. Special stress was placed on making the work of the county orders stronger and more effective. At the meetings of the county orders the following subjects are to be emphasized:

1. Value of home grown corn for silage.
2. Seed corn curing houses.
3. Necessity of grading grains every year in order to keep up the yielding qualities.
4. Soy beans as a soil improver and forage crop.
5. Value and necessity of county order exhibits.

The greatest and best grain contest ever held since the organization of the Association was placed in the Agronomy Building for an entire week, where it was judged and prizes awarded to the successful exhibitors.

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MINUTES OF THE MEETING OF THE EXECUTIVE COMMITTEE—FRIDAY, FEB. 7, 1919.

J. B. Cheesman, Presiding.

Report of work of the Association during the past year by Professor R. A. Moore was read and adopted.

The following plans were presented by Mr. T. H. Campion:—

1. That a two-acre corn yield contest be held.
2. That county orders be classified according to number of members.
3. That the county order securing the highest number of points at the Annual Grain Show be awarded a silver trophy.
4. That the Experiment Association adopt a letter head which may be used by its members.

Professor Moore moved that Mr. Campion's suggestions be arranged in permanent form and be embodied in the Annual Report, as an appendix to the Secretary's report. Motion seconded and carried.

At the suggestion of Mr. H. E. Krueger, it was moved that the Wisconsin Experiment Association make an effort to exhibit at the National Soils Products exhibition or other national exhibition if the Secretary deems such plan advisable. Motion seconded and carried.

The budget for 1919 was presented and discussed. Professor Moore presented the financial report of the Secretary and in the absence of the Treasurer, presented also the Treasurer's Report. Both reports were placed in the hands of the Finance Committee for approval. Mr. Rufus Gillette moved that the report be adopted as read. Motion seconded and carried.

Moved by H. E. Krueger that owing to the fact that the Association does not meet this year the term of the present officers be extended until the next annual meeting. Motion was seconded and carried. Meeting adjourned.

NEW FEATURES FOR 1919

At the last annual meeting of the Executive Committee, the following new features were adopted:—

CLASSIFICATION OF COUNTY ORDERS

Class A—50 or more members

Class B—30 or more members

Class C—20 or more members

County Orders will receive seed for experimental work on the basis of classification.

Class A—10 bushels

Class B— 4 bushels

Class C— 2 bushels

In case of corn, 10 lbs. of seed will be considered equivalent to 1 bu. small grain.

Any County Order having more than 50 members will be privileged to get one additional bushel of seed for every ten additional members.

TROPHY FOR COUNTY ORDERS AT STATE GRAIN SHOW

A silver trophy will be awarded to the County Order whose members score the greatest number of points at the Annual Show. Basis of award to be as follows:

For each First—5 points

For each Second—4 points

For each Third—3 points

For each Fourth—2 points

For each Fifth—1 point

TWO-ACRE CORN YIELD CONTEST

Any member of the Association or any County Order may enter two acres to compete on the basis of yield for the following premiums:—

First Prize—Pure Bred Bull Calf (Any Breed)

Second

Third

Fourth

Fifth

To be announced later.

The Secretary will furnish rules and enrollment blanks. Entry must be made by June 1st.

RULES OF TWO-ACRE CORN YIELD CONTEST

1. Standard variety of Wisconsin corn must be grown (Silver King (No. 7), Golden Glow (No. 12), Early Yellow (No. 8), Yellow Dent (No. 25), Clark's Yellow Dent, Murdock).

2. Entry must be made by June 1st.

3. The Secretary of the County Order and the County Superintendent of Schools shall select a third party to make up a committee within the county to see that all rules of the contest are carried out. If the Secretary of the County Order or County Superintendent of Schools are unable to act as members of said committee, the Secretary of the State Association shall appoint the other members of the committee.

4. The contestant may grow just two acres or he may select any two acres from a large acreage to compete for the premium. However, the two acres must be designated by August 1, 1919.

JUNIOR DEPARTMENT—ANNUAL GRAIN SHOW—WISCONSIN EXPERIMENT ASSOCIATION

OPEN TO BOYS AND GIRLS CORN CLUB MEMBERS

I. JUNIOR CORN EXHIBIT CONTEST:

- Best 10 Ears No. 7 corn—1st, 2nd, 3rd, 4th, 5th, 6th
- Best 10 Ears No. 12 corn—1st, 2nd, 3rd, 4th, 5th, 6th
- Best 10 Ears No. 8 corn—1st, 2nd, 3rd
- Best 10 Ears No. 25 corn—1st, 2nd, 3rd
- Best Single Ear—Any Variety—1st, 2nd, 3rd.

II. CORN CLUB—INDIVIDUAL MEMBER CONTEST:

The **Best Corn Club Member** in the state will be selected by the State Club Leader, on the basis of the **Corn Record Report** and the **Ten Ear Exhibit** displayed at the Grain Show.

Prizes will be given to winners of 1st, 2nd, etc. places.

III. CORN CLUB CONTEST:

The **Best Corn Club** in the State will be determined by the State Club Leader on the basis of **Corn Record Reports** and **Ten Ear Exhibits** displayed at the Grain Show.

Clubs competing in this contest must have five or more members with **Reports** and **Exhibits** at the Grain Show.

Prizes will be given to winners at 1st, 2nd, etc. places.

JUNIOR CORN JUDGING CONTEST

OPEN TO CORN CLUB MEMBERS AND SCHOOL REPRESENTATIVES

IV. INDIVIDUAL CORN JUDGING CONTEST:

The competitors will judge and score samples of corn at the Grain Show, and the **Best Corn Judge** will be determined by ability shown in scoring and judging.

Prizes will be given to winners of 1st, 2nd, etc. places.

V. CORN JUDGING TEAM CONTEST:

A team consists of three members of a club or school who are designated to represent such club or school in the contest.

The team representatives will compete in the individual judging contest, and their individual scores will be added to compute the team standing.

1st prize—Cup (to be held by the club for one year, until won twice in succession or three times by one club, when it will become the permanent property of that club).

2nd prize—Banner.

ANNUAL REPORT OF THE ALFALFA ORDER FOR 1918

BY THE SECRETARY

The regular annual meeting and program were not held due to the Influenza epidemic but the executive committee held conference and voted unanimously that the present officers should be continued until the next annual meeting.

The distribution of Grimm and other hardy varieties of alfalfa seed for experimental purposes is being continued and very gratifying reports were received last Spring (1918) on the Grimm sent out by the Association in 1916.

GRIMM DISTRIBUTED IN 1916 SHOWS DECIDED

SUPERIORITY IN HARDINESS

Following the first winter 1916-1917 which was not particularly severe there were 48 reports received—36 of which stated that a superiority in the hardiness and cold resistance of Grimm alfalfa could be noticed in comparison with common alfalfa while sixteen farmers making the trial reported that at this time the common was in every respect just as good as the Grimm.

The winter of 1917-1918 was exceedingly severe causing dire losses of both red clover and alfalfa throughout the state. With these climatic conditions, Grimm and common were put to the test. Forty-six farmers reported their experience following the second winter with this Grimm our Association furnished them in 1916 with the common growing immediately adjacent. Twenty-eight of these farmers found their common practically all winterkilled in the spring of 1918 while this Grimm in the same field came through with no serious winter injury except in a few cases where the weather conditions were such that even the Grimm partially winterkilled.

Fourteen observed a decided difference in favor of Grimm but their results were not nearly so pronounced as the others.

Four reports indicated that the two winters so far had not been sufficient to cause winterkilling of either Grimm or Common.

The big problem, however, is to get the true genuine Grimm alfalfa seed and our organization has taken important steps to locate the most reliable growers. The Secretary of the Alfalfa Order spent several weeks out West in the summer of 1918 inspecting fields and investigating the integrity of many of the largest growers of Grimm alfalfa. Detailed report of this will be submitted at our next annual meeting. Suffice to say at this time that there are several large producers of true hardy Grimm alfalfa seed out West which we have confidence, will prove to be valuable sources of this hardy variety of alfalfa seed. Grimm alfalfa seed should not be purchased by anyone unless its origin and all other circumstances indicate that the seed is true to name. Purchasers of Grimm should buy their seed early. It is poor policy to wait until seeding time.

CARDINAL POINTS FOR SUCCESS WITH ALFALFA

L. F. GRABER, *Sec'y Alfalfa Order*

Get inoculated with the right ideas about growing alfalfa.
Sow alfalfa right or don't sow it at all.

Give it a square deal, if you expect a square deal in return.
Alfalfa is a rather PARTICULAR crop but it requires nothing in the way of soil treatment but what is largely required to produce the most abundant yields of corn, small grains and other crops.

AVOID FLAT LANDS

If you have a heavy flat soil with a hard pan subsoil, or a tight blue or red clay subsoil that does not permit good under drainage, *leave alfalfa alone*. You will have better luck with timothy and alsike. Alfalfa *must* have good surface and under drainage. It likes a gravelly limestone subsoil best. Sometimes it grows remarkably well on rich bottom lands or on black flat prairie loams that have good thorough under drainage but in certain years it will suffer most severely from ice sheets and other winter injury on any flat ground. CHOOSE A SLOPING SOIL.

SELECT A REASONABLY RICH SOIL

It's just a waste of time and money to attempt growing alfalfa on a worn-out piece of ground. If your land is not rich and fertile put on a good dressing of manure and in many instances phosphate fertilizer would help immensely. REMEMBER—

Lime, inoculation and manure,
Make alfalfa doubly sure.

USE CLEAN GROUND

If you want to avoid weed trouble have your alfalfa follow some well cultivated crop like corn or potatoes. If weeds get bad the first season clip them high prior to August 15. Use a grain binder. It works fine. Haul the cut weeds off the field if there is a heavy growth.

WHAT ALFALFA NEEDS MOST—LIME

Don't throw away money, time and labor in trying to grow alfalfa on sour ground without using lime. Take no chances on that soil of yours. *Find out if it needs lime.* Have it tested and save money. Get your County Agent to do it or send a five ounce sample to your Experiment Station. They will let you know how much lime, if any, you should use for success with alfalfa. If your soil is very sour and you are not in a position to get ground limestone or some other suitable form of lime, *better wait with alfalfa.* Lack of lime has been the cause of thousands of failures in the way of sickly yellow *starving alfalfa fields.* Why take a chance? Have your soil tested and play sure. Every ton of alfalfa contains 100 pounds of lime which it has taken out of the soil. If it doesn't get all the lime it needs you will have a miserable crop. *Use Lime if Your Ground Needs It.*

INOCULATE

Where alfalfa has not been previously grown, either the seed or the soil should certainly be inoculated. Why take a risk? The soil method or good cultures which can be gotten from your Experimental Station will give excellent results.

ROLL! ROLL! ROLL!

Alfalfa wants a firm but well prepared seed bed. Fall plowing is the best with the heavier soils as it gives the soil time to settle and become firm. Alfalfa sown on spring plowed ground,

and, especially loose sandy soils, is greatly benefited by rolling with a corrugated roller. It helps clover also and brings better yields of grain. The corrugated roller is a much needed implement on many farms. Alfalfa wants a firm seed bed with the lumps on the surface well broken up. The corrugated roller will do this. GET ONE. You will never regret it.

USE ENOUGH SEED

If your land has lots of lime and a good open gravelly sub-soil and grows alfalfa easily, 14 to 16 lbs. an acre of good seed that germinates 90 per cent or above is sufficient. If you are sowing alfalfa for the first time better use 20 lbs. Especially this year when alfalfa, particularly the Grimm and other hardy varieties may contain a high percentage of hard slow sprouting seeds *better use twenty pounds.*

TRY MIXING A LITTLE TIMOTHY WITH ALFALFA

It is surprising how well timothy grows with alfalfa. The first crop is ready to cut just when the timothy is headed out and at this stage timothy is very palatable and digestible. The second and third crops will be pure alfalfa. But the big point is—suppose the alfalfa should winterkill? You will have the timothy left and the way it thickens up and grows on those dead alfalfa roots is very remarkable. When winterkilling occurs, a crop of timothy is far better than nothing. Try at least in a small way mixing in one-fourth or one-fifth timothy by weight with your alfalfa. Sow the mixture 20 pounds an acre.

MIX ALFALFA SEED IN WITH ALL YOUR TIMOTHY AND CLOVER SEEDING

It is a splendid idea on most farms to mix in with your regular timothy and clover seedings from 2 to 4 pounds of alfalfa seed per acre. Inoculate this seed before mixing and you will soon get your whole farm inoculated for future crops of alfalfa. Alfalfa growing with timothy and clover improves the yield and quality of hay and at the same time you can get some idea of how well your soil will grow alfalfa. Even, if your ground is a little sour, a thin sprinkling of alfalfa plants will get sufficient lime for a good strong healthy growth.

INSURE AGAINST DROUGHT AND GRASSHOPPERS

Many a good stand of alfalfa and of clover too is ruined by the summer's drought. Grasshoppers are fierce in some sections. Here's a way to play reasonably safe on this. Sow your alfalfa with one bushel of early ripening grain an acre. *Cut this grain for hay just after it has headed out.* This gives the alfalfa a good growing start to stand later summer drought as well as grasshopper injury. Cutting the nurse crop for hay is absolutely necessary when grain lodges, otherwise the alfalfa will smother. Would especially advise this method when high priced Grimm or Baltic alfalfa seed is used. With this plan you take little chance at a failure if your soil conditions are right. Canning peas make an excellent nurse crop because they are cut early (generally in June.) Other methods can be used that late summer or fall seeding should be avoided.

KEEP A GOOD FIELD AND AVOID BLUE GRASS TROUBLES

Don't cut or pasture your alfalfa after the first week in September. For Alfalfa's sake don't do this. Resist that temptation. Don't kill the goose that lays the golden eggs by trying to get an extra crop late in the fall. Alfalfa needs a growth of from 6 to 8 inches for protection against winterkilling. Grimm and Baltic alfalfa will stand later fall cutting than common but even these hardy varieties suffer from this injurious practice. *Play safe.* Don't cut or pasture any alfalfa after the first week in September.

HARDY VARIETIES FOR A STAND THAT WILL LAST

It is true that Grimm, Baltic and Cossack will live through hard winters where common alfalfa may kill out, but remember it is rather difficult to get genuine seed. It is expensive and there is no way to distinguish the seed of any of these hardy alfalfas from common. Buy only from the most reliable sources. There is nothing about these varieties that makes them better than common except their unusual hardiness. They are not absolutely winterproof but they will live through winters where common ordinary Montana or Dakota or Kansas alfalfa kills out. It is just as hard to get a stand with Grimm or Baltic as it is with common but it is generally possible to keep a stand of Grimm or Baltic where common may "kill" after the first or second winter. You are not so apt to have blue grass troubles with these hardy varieties as you are with common.



SHEAVES OF GRAIN AND FORAGE CROPS FROM BADGER FIELDS

RESOLUTIONS

Whereas, the Honorable W. D. Hoard full of ripened experience whose fruitage will endure, having passed over the divide; we his friends, co-workers, and standard bearers of his faith in man, and hope for the betterment of agriculture, record our sense of appreciation.

Resolved: That the Wisconsin Agricultural Experiment Association and the Alfalfa Order, in annual meeting assembled do hereby record our high esteem for the character of our beloved associate and leader in all paths of usefulness. During the thirty-four years of our friendship he was always initiating something fresh and was at all times busy in executing the well devised plans and schemes which engaged his interest. We recall the varied subjects, and many occasions which enabled him to instruct, inspire, encourage, and amuse his fellow workers, and the faith he awakened, the hopes he planted, and the joy and happiness which were aroused at the touch of his simple speech, his humor and rich sympathy in the fellowship of mankind.

Committee on Resolutions.

James B. Cheesman, Chairman.

R. A. Moore, Secretary.

L. F. Graber, Secretary Alfalfa Order.

2-27-19.

TREASURER'S REPORT

Peter C. Swartz, treasurer, reported on the financial conditions of the Association as follows:

Balance in Association treasury, Feb. 8, 1918.....	\$1,159.99
Receipts, Feb. 8, 1918 to Feb. 7, 1919.....	1,491.24
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Total receipts on hand, Feb. 7, 1919.....	\$2,651.23
Total disbursements, Feb. 8, 1918 to Feb. 7, 1919.....	1,427.87
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Balance in Association treasury, Feb. 7, 1919.....	\$1,223.36

SECRETARY'S REPORT

R. A. Moore, secretary, reported on the use and condition of state funds. He reported as follows:

Balance in State Treasury, Feb. 8, 1918.....	\$2,522.67
State appropriation, July 1, 1918.....	5,000.00
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Total	\$7,522.67
Total disbursements, Feb. 8, 1918 to Feb. 7, 1919.....	3,734.42
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Balance in State Treasury, Feb. 7, 1919.....	\$3,788.25

The itemized financial reports are on file for inspection in the office of the Association.

PREMIUM AWARDS

AT ANNUAL PURE BRED GRAIN SHOW FEB. 3—8, 1919.

College of Agriculture, Madison, Wisconsin

- 10 Ears Silver King (Wisconsin No. 7) Corn, North Section
First—H. Lunz, Clintonville
Second—Geo. J. Ruemele, Hudson
Third—Frank Blonde, Green Bay, R. 2
Fourth—Max Duquaine, New Franken
- 10 Ears Early Yellow Dent (Wisconsin No. 8) Corn, North Section
First—Fred Cisar, R. 2, Oconto
Second—Adolph Feifarek, Peshtigo
Third—John Wellens, DePere
Fourth—Chas. Hull, Tigerton
Fifth—Louis Becker, Rothschild
- 10 Ears Golden Glow (Wisconsin No. 12) Corn, North Section
First—Geo. J. Rumele, Hudson
Second—Jacobson Bros., R. 7, Green Bay
Third—Chas. Hull, Tigerton
Fourth—Wm. Ohlfs, Crivitz
Fifth—Jos. J. Vandenplas, R. 2, Green Bay
- 10 Ears Wisconsin No. 25 Corn, North Section
First—H. C. Hanson, Spooner
Second—J. Carstens, Crivitz
- 10 Ears Early Silver King (Wisconsin No. 7) Corn, South Section
First—John Bendel, Stoddard
Second—Burton J. Hopper, Beloit
Third—C. S. Ristow, Black River Falls
Fourth—Adolph Thompson, Black River Falls
Fifth—Ed. Peters, R. 2, La Crosse
- 10 Ears Early Yellow Dent (Wisconsin No. 8) Corn, South Section
First—R. H. Lang, Jefferson
Second—Hieron J. Block, Burlington
Third—J. R. Thorpe, R. 29, Beloit
Fourth—Robt. W. Ward, Ft. Atkinson
Fifth—Geo. H. Leonard, Ft. Atkinson
- 10 Ears Golden Glow (Wisconsin No. 12) Corn, South Section
First—Joseph A. Brunker, Ridgeway
Second—S. P. Markle, R. 1, La Crosse
Third—Lang Bros., Jefferson
Fourth—John Bendel, Stoddard
Fifth—Otto Wolf, La Crosse
- 10 Ears Clark's Yellow Dent (Wisconsin No. 1) Corn, Any Part of State
First—Roscoe Biddick, Livingston
Second—Robert W. Ward, Ft. Atkinson

- 10 Ears Toole's North Star (Wisconsin No. 11) Corn, Any Part of State
Second—Noyes Raessler, Beloit
- 10 Ears Murdock (Wisconsin No. 13) Corn, Any Part of State
First—H. C. Brueckner, Jefferson
Second—Leo Brueckner, Jefferson
Third—C. Dickelboher, Onalaska
Fourth—John Bendel, Stoddard
- 10 Ears 8 Row Red, Yellow or Smut Nose Flint Corn, Any Part of State
First—Wm. R. Leonard, Ft. Atkinson
Second—John Chambers, Green Bay, R. 9
- 10 Ears 8 Row White Flint Corn, Any Part of State
First—Frank Gasper, Rockland
Second—Anton Bohl, Beaver Dam
- 10 Ears Pop Corn, Any Part of State
First—Wm. R. Leonard, Ft. Atkinson
Second—Henry Baumgartner & Sons, Wrightstown
Third—P. W. Jones, Black River Falls
- 10 Ears Sweet Corn, Any Part of State
First—Theo. S. Ward, Ft. Atkinson
Second—S. P. Markle, La Crosse
Third—(Miss) F. May Lyndon, Delavan
- Single Ear Dent Corn, any Variety, Any Part of State
First—H. C. Brueckner, Jefferson
Second—Lang Bros., Jefferson
Third—Hieron J. Block, Burlington
Fourth—J. W. Leverich, Sparta
Fifth—J. Emmett Brunner, Ridgeway
- 50 Ears Silver King (Wis. No. 7) Corn, Any Part of State
First—S. P. Markle, La Crosse
Second—Joseph A. Brunner, Ridgeway
Third—J. R. Thorpe, R. 29, Beloit
Fourth—J. Emmett Brunner, Ridgeway
Fifth—Ed. Peters, R. 2, La Crosse
- 50 Ears Golden Glow (Wis. No. 12) Corn, Any Part of State
First—Jippa Wielinga, Midway
Second—Jos. A. Brunner, Ridgeway
Third—John Van Loon, La Crosse
Fourth—John Bendel, Stoddard
Fifth—Adolph Thompson, Black River Falls
- 50 Ears Murdock (Wis. No. 13) Corn, Any Part of State
First—H. C. Brueckner, Jefferson
Second—Leo Brueckner, Jefferson
- Best Peck Wisconsin Pedigree or Oderbrucker Barley
First—Wm. H. Basse, Sta. D., R. 3, Milwaukee
Second—Henry Baumgartner & Sons, Wrightstown
Third—Joseph Schneider, New Franken
Fourth—Jacobson Bros., R. 7, Green Bay
Noyes Raessler, Beloit

Best Peck Two Row Barley

First—H. T. Draheim, Gotham

Best Peck Wisconsin Pedigree No. 1 Oats

First—Henry Baumgartner & Sons, Wrightstown

Second—Jacobson Bros., R. 7, Green Bay

Third—Morrisey Bros., Arena

Fourth—J. L. Krause, Reeseville

Fifth—Wm. H. Basse, Sta. D., R. 3, Milwaukee

Best Peck Pedigree No. 5 or Swedish Select Oats

First—Henry Baumgartner & Sons, Wrightstown

Second—H. W. Whitehead, Rockland

Third—Jacobson Bros., R. 7, Green Bay

Fourth—J. L. Krause, Reeseville

Fifth—Frank Gasper, Rockland

Best Peck Kherson or 60 Day Oats

First—Lewis Schoenich, Dousman

Second—H. W. Whitehead, Rockland

Third—J. L. Krause, Reeseville

Fourth—Theo. S. Ward, Ft. Atkinson

Fifth—H. T. Draheim, Gotham

Best Peck Any Other Variety of Oats Not Included in Ped. or Kherson

First—Henry Baumgartner & Sons, Wrightstown

Second—J. L. Krause, Reeseville

Third—Herman Schoeneck, Enterprise

Fourth—Theo. S. Ward, Ft. Atkinson

Fifth—Dewitt Damp, Dane

Best Peck Winter Wheat

First—F. C. Lewallen, West Newton, Ind.

Second—J. J. Ihrig, Oshkosh

Third—Joseph Schneider, New Franken

Fourth—John Ramsey, Peshtigo

Fifth—Lang Bros., Jefferson

Best Peck Spring Wheat

First—Schwartz Bros., Waukesha

Second—Henry Baumgartner & Sons, Wrightstown

Third—Joseph Schneider, New Franken

Fourth—H. Bentz, Rockfield

Fifth—H. B. Berndt, DePere

Best Peck Wisconsin Pedigree Winter Rye

First—A. H. Thompson, Black River Falls

Second—Herman Schoeneck, Enterprise

Third—R. Kressin, Jackson

Fourth—J. L. Krause, Reeseville

Fifth—Fred Swenningson, R. 3, Peshtigo

Best Peck Medium Red Clover

First—Schmidt Bros., Foxboro

Second—R. Kressin, Jackson

Third—J. L. Krause, Reeseville

Fourth—John Hesprich, Lomira

Fifth—A. H. Thompson, Black River Falls

Best Peck Mammoth Clover

- First—H. Lunz, Clintonville
Second—J. L. Krause, Reeseville
Third—Stanley Sebion, Westby

Best Peck Alsike Clover

- First—H. Lunz, Clintonville
Second—Schmidt Bros., Foxboro
Third—J. L. Krause, Reeseville

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Best Peck Timothy

- First—J. L. Krause, Reeseville
Second—H. Lunz, Clintonville

Best Peck Silver Hull Buckwheat

- First—H. W. Whitehead, Rockland
Second—A. H. Thompson, Black River Falls

Best Peck Japanese Buckwheat

- First—H. T. Draheim, Gotham

Best Peck Black Soy Beans

- First—Albert Dettman, R. 1, Marinette
Second—H. Lunz, Clintonville
Third—Joseph J. Vanderplas, Green Bay, R. 2

Best Peck Yellow Soy Beans

- First—H. T. Draheim, Gotham
Second—Robt. W. Ward, Ft. Atkinson
Third—Theo. S. Ward, Ft. Atkinson
Fourth—C. S. Ristow, Black River Falls

Best Peck Smooth or Wrinkled Peas

- First—Nelson Jodon, Solon Springs
Second—Wm. R. Leonard, Ft. Atkinson
Third—John Wellens, DePere

Best Peck Scotch Peas

- First—Fred Swenningson, R. 3, Peshtigo
Second—Max Duquaine, New Franken
Third—T. S. Joyce, DePere

Best Peck Green Peas

- First—A. G. Searing, Ashland Jct.
Second—E. C. Liebmann, Green Bay

Best Peck Any Other Variety of Field Peas

- First—H. Lunz, Clintonville
Second—R. Kressin, Jackson

Best Sheaf Oderbrucker Barley

- First—Henry Baumgartner & Sons, Wrightstown
Second—H. T. Draheim, Gotham
Third—Jacobson Bros., R. 7, Green Bay
Fourth—A. H. Thompson, Black River Falls
Fifth—Otto Wolf, La Crosse

Best Sheaf Two Row Barley

- First—H. T. Draheim, Gotham
Second—Jacobson Bros., R. 7, Green Bay
Third—Robt. W. Ward, Ft. Atkinson

Best Sheaf Pedigree No. 1 Oats

- First—Henry Baumgartner & Sons, Wrightstown
- Second—Jacobson Bros., R. 7, Green Bay
- Third—Peter Dengel, La Crosse
- Fourth—H. T. Draheim, Gotham
- Fifth—J. L. Krause, Reeseville

Best Sheaf Swedish Select or Any Other Variety of Oats

- First—Jacobson Bros., R. 7, Green Bay
- Second—L. M. Hanson, Mondovi
- Third—J. L. Krause, Reeseville
- Fourth—Otto Wolf, R. 2, La Crosse
- Fifth—Stanley Sebion, Westby

Best Sheaf Winter Wheat

- First—Noyes Raessler, Beloit
- Second—J. L. Krause, Reeseville
- Third—Geo. J. Ruemele, Hudson
- Fourth—Stanley Sebion, Westby
- Fifth—Ed. Peters, R. 2, La Crosse

Best Sheaf Spring Wheat

- First—H. T. Draheim, Gotham
- Second—Henry Baumgartner & Sons, Wrightstown
- Third—A. H. Thompson, Black River Falls
- Fourth—Stanley Sebion, Westby
- Fifth—W. E. Spreiter, Onalaska

Best Sheaf Pedigree Rye

- First—Ed. Peters, R. 2, La Crosse
- Second—J. L. Krause, Reeseville
- Third—Otto Wolf, R. 2, La Crosse
- Fourth—A. H. Thompson, Black River Falls
- Fifth—Noyes Raessler, Beloit

Best Bundle of Alfalfa

- First—Michels Bros., Peebles
- Second—Walter Steinhoff, Platteville
- Third—Schwartz Bros., Waukesha
- Fourth—Noyes Raessler, Beloit
- Fifth—L. M. Hanson, Mondovi

Best Exhibit Consisting of 1st, 2nd and 3rd Cuttings of Alfalfa

- First—A. J. Stace, Portage
- Second—Jacobson Bros., R. 7, Green Bay

Best Bundle Red Clover

- First—H. T. Draheim, Gotham
- Second—Henry Baumgartner & Sons, Wrightstown
- Third—Otto Wolf, R. 2, La Crosse
- Fourth—J. L. Krause, Reeseville
- Fifth—John T. Hesprich, Lomira

Best Bundle Alsike Clover

- First—H. T. Draheim, Gotham
- Second—J. L. Krause, Reeseville
- Third—Henry Baumgartner & Sons, Wrightstown
- Fourth—A. J. Stace, Portage
- Fifth—Otto Wolf, R. 2, La Crosse

Best Bundle Mammoth Clover

First—Otto Wolf, La Crosse

Second—J. L. Krause, Reeseville

Best Bundle Timothy

First—Stanley Sebion, Westby

Second—H. T. Draheim, Gotham

Third—Henry Baumgartner & Sons, Wrightstown

Fourth—Otto Wolf, R. 2, La Crosse

Fifth—J. L. Krause, Reeseville

Best Bundle Sudan Grass

First—H. T. Draheim, Gotham

Second—Jippa Wielinga, Midway

Third—A. J. Stace, Portage

Fourth—John Van Loon, R. 1, La Crosse

Fifth—J. L. Krause, Reeseville

Best Bundle Soy Bean Hay

First—A. J. Stace, Portage

Second—Noyes Raessler, Beloit

Third—Herman Schoeneck, Enterprise

Fourth—H. T. Draheim, Gotham

Fifth—Walter J. Steinhoff, Platteville

Best Bundle Mature Soy Beans

First—H. T. Draheim, Gotham

Second—J. L. Krause, Reeseville

Third—Theo. S. Ward, Ft. Atkinson

Fourth—Noyes Raessler, Beloit

HONORARY CLASSES

- 10 Ears Clark's Yellow Dent (Wis. No. 1) Corn
First—H. T. Draheim, Gotham
Second—Elmer Biddick, Livingston
- 10 Ears Silver King (Wis. No. 7) Corn
First—J. R. Thorpe, R. 29, Beloit
Second—S. P. Markle, La Crosse, R. 1
Third—J. Emmett Brunner, Ridgeway
- 10 Ears Early Yellow Dent (Wis. No. 8) Corn
First—Lang Bros., Jefferson
Second—Wm. Schwandt, New Richmond
- 10 Ears Golden Glow (Wis. No. 12) Corn
First—J. Emmett Brunner, Ridgeway
Second—H. T. Draheim, Gotham
Third—Noyes Raessler, Beloit
- 10 Ears Any Variety 8 Row Flint Corn
First—H. T. Draheim, Gotham
Second—Geo. H. Leonard, Ft. Atkinson
- Best Peck Pedigree or Oderbrucker Barley
First—Anton Bohl, Beaver Dam
- Best Peck Pedigree No. 1 Oats
First—H. T. Draheim, Gotham
Second—H. W. Whitehead, Rockland
Third—Albert Baumgartner, Wrightstown
- Best Peck Pedigree No. 5 or Swedish Select Oats
First—H. T. Draheim, Gotham
Second—Chas. Michelson, Rhinelander
- Best Peck Winter Wheat
First—Noyes Raessler, Beloit
Second—Wm. H. Basse, Sta. D., R. 3, Milwaukee
Third—J. L. Krause, Reeseville
- Best Peck Spring Wheat
First—Noyes Raessler, Beloit
- Best Peck Pedigree Rye
First—Noyes Raessler, Beloit
Second—Edward Whitemore, Wausau

SWEEPSTAKE CLASS

10 Ears Silver King (Wis. No. 7) Corn
First—John Bendel, Stoddard

Peck Pedigree No. 1 Oats
First—H. T. Draheim, Gotham

Peck Spring Wheat
First—Schwartz Bros., Waukesha

Peck Winter Rye
First—Noyes Raessler, Beloit

Bundle Pedigree Barley
First—Henry Baumgartner & Sons, Wrightstown

10 Ears Yellow Dent Corn
First—Jos. A. Brunker, Ridgeway

50 Ears Silver King
First—S. P. Markle, R. 1, La Crosse

Peck Pedigree No. 5 Oats
First—Henry Baumgartner & Sons, Wrightstown

Grand Champion 10 Ears Dent Corn of Entire Show
First—Jos. A. Brunker, Ridgeway

PROPOSED CHANGES IN PREMIUM LIST FOR 1920

Class A—Corn, North Section

Add Best 50 ears Golden Glow (Wis. No. 12)

Add Best 50 ears Early Yellow Dent (Wis. No. 8)

Class B—Corn, South Section

Omit the following and omit same from Class C

Best 10 ears Clark's Yellow Dent (Wis. No. 1)

Best 10 ears Murdock (Wis. No. 13)

Best 50 ears Silver King (Wis. No. 7)

Best 50 ears Golden Glow (Wis. No. 12)

Best 50 ears Murdock (Wis. No. 13) or Clark's Yellow Dent (Wis. No. 1)

Class C—Any part of state

Omit classes added to South Section of state and omit all special flint varieties except one class—"Best 10 ears Flint Corn"

Class D—Barley

Omit best peck two-row barley

Class E—Oats

Omit "Any other variety oats". Add to rules—"Any sample unduly scoured or clipped will be out or disqualified at discretion of judge."

Class G—Rye

Add Best peck Spring Rye

Class H—Clover Seed

Combine Medium Red and Mammoth Clover seed into one class: Clover seed, Medium Red or Mammoth (variety named)

Class J—Alfalfa Seed

Omit Alfalfa Seed

Class L—Soy Beans

Change Yellow Soy Beans to Ito San Soy Beans

Add Manchu Soy Beans

Class O—Barley in Sheaf

Omit Sheaf two-row barley

Class P—Oats in Sheaf

Omit any other variety oats

Add Best sheaf Kherson Oats

Class S—Alfalfa Hay

Add to First, Second and Third Cuttings of Alfalfa, "Each bundle labeled with date of cutting"

Class U—Timothy Hay

Omit Timothy Hay Class

Change to Class U—Hay

Add Best Bundle Timothy Hay and Best Bundle any other hay, not included in other hay classes.

Change of Rules—Under Rule 5, omit the word "alfalfa".

Change of rules

Add: Two or more members operating the same farm will be allowed to make only one entry in any class and if such exhibit wins first place, any exhibit in this class from said farm must be entered in the honorary class in subsequent years.

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CONSTITUTION AND BY-LAWS OF THE COUNTY ORDERS OF THE WISCONSIN AGRICULTURAL EXPERIMENT ASSOCIATION

Article I—Name. The organization shall be known as the.....
.....County Order of the Wisconsin Experiment Association.

Article II.—Object. The object of this organization shall be to promote the agricultural interests of the County and State in general.

1st. By cooperating with the Experiment Association in growing and disseminating pure bred seed grains.

2nd. By having Associations' exhibits at agricultural fairs.

3rd. By having annual meetings in order to report and discuss topics beneficial to the members of the Order.

Article III—Membership. 1. Any person may become a member of this Order who has taken a course in the College of Agriculture at Madison or at any place in the State under the jurisdiction of the College.

2. Any one who is interested in pure bred grains and live stock or in progressive farming in general may become a member of this Order.

3. Honorary membership may be conferred upon anyone interested in progressive agriculture by a majority vote at any annual or special meeting.

Article IV.—Dues. A fee of fifty cents shall be collected from each member annually.

Article V—Officers. The officers of this Order shall consist of a President, Vice President and Secretary-Treasurer, whose terms of office shall be one year, or until their successors are elected.

Article VI. Duties of Officers. 1. It shall be the duty of the President to preside at all meetings of the Order and to enforce the observance of such rules and regulations as will be for the best interest of the organization; to appoint all regular committees as he may deem expedient for the welfare of the Order.

2. In the absence of the President, the Vice President shall preside and perform the duties of the President.

3. The Secretary-Treasurer shall keep the records of all meetings and proceedings of the Order, also the names of all members and their addresses. He shall also keep the funds of the Order, collect all fees,

pay all debts, and shall submit a written statement of all moneys received and paid out by him and shall balance his books not later than one month before the annual meeting.

Article VII—Disbursements. The funds of the Order shall be used to defray expenses or by vote of the Order for such purposes as will advance the agricultural interests of the Order and shall be paid out only upon an order signed by the President and countersigned by the Secretary.

Article VIII—Amendments. This constitution may be amended at any meeting, by a two-thirds vote of the members of the Order present.

BY-LAWS

Article I—The officers of this Order shall be elected by ballot at the annual meeting.

Article II—This Order shall be governed by Roberts' Rules of Order.


Article III—All members joining at the organization of this Order shall be known as Charter Members.

Article IV—The time and place of holding the annual meeting shall be determined by the officers.

Adopted....., 19.....

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Industrial Recreation

Its Development and Present Status



THE CHAMPIONS

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INDUSTRIAL RECREATION

ITS DEVELOPMENT AND PRESENT STATUS

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and

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Sponsored by

Division of Physical Education for Men

and

Personnel Service, Schools of Engineering and Science

PURDUE UNIVERSITY

Lafayette, Indiana

1940

PREFACE

This monograph has been prepared for those leaders responsible for industrial recreation. It should be of help to companies that are anticipating the initiation of a new program in recreation for their employees. Furthermore, it should provide a standard for the evaluation of a previously established program.

The increase of leisure time in industry, through the reduction in hours of work, has given management the problem of industrial recreation. The material herein presented gives a reliable cross-section picture of the present status of industrial recreation, which should provide guide posts for the redirection of the industrial recreation program of the future.

The information used in this monograph was collected on a national basis from directors of recreation, personnel directors, and company officers who supervised or guided an industrial recreation program for their employees. The company visitations as well as the collection, tabulation, and analysis of these data were made by Leonard J. Diehl. Through a grant established under the Purdue Research Foundation, funds were made available for this study, which was co-operatively directed by the Division of Physical Education for Men and the Personnel Service of the Schools of Engineering and Science. The present report has been edited by Dr. Floyd R. Eastwood, Associate Professor of Physical Education, in charge of Health and Teacher Training, Purdue University.

Acknowledgment is made to the Brunswick Balke-Collender Company of Chicago, Illinois, which through Lorin W. Smith, Jr., Director of Educational Relations, made available to the Purdue Research Foundation funds necessary to make this survey; to G. Stanley Meikle, Director of Research Relations with Industry, Purdue University, for his advice and guidance in the establishment of this Research Foundation Fellowship; to Dr. J. E. Walters and Professor David Arm of the Personnel Service, Schools of Science and Engineering, Purdue University, for their co-operation and guidance in the initiation and completion of this survey; to Russell Greenly, Professor of Trade and Industrial Education, and Dr. Lillian M. Gilbreth, of the Division of General Engineering, Purdue University, for their comments and criticisms in the preparation of the material; to E. C. Worman, Industrial Recreation Specialist, National Recreation Association; L. H. Weir, Field Repre-

sentative, National Recreation Association; J. F. Walsh, Athletic Director, Chrysler Corporation, Detroit, Michigan; L. P. Wittenberg, Department of Industrial Relations, General Motors Corporation, Detroit, Michigan; and R. B. Tefferteller, Department of Cultural Activities, Amalgamated Clothing Workers of America, Cincinnati, Ohio, for their most valuable help in the preparation of the questionnaire; to the host of personnel directors, company officials, and industrial recreation directors whose aid and helpful suggestions made possible the collection of information used in this survey.

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CHAPTER I

SUMMARY OF FINDINGS

EXTENT OF INDUSTRIAL RECREATION

1. The results that are discussed herein were obtained from thirty case studies and from 609 (26%) returns of the 2,486 questionnaires sent out. The questionnaires were received from companies located in 38 states. These companies employed an estimated total of 658,034 employees (page 22).

2. Of the total 639 returns, 38 per cent of the companies had industrial recreational programs (page 22).

3. The current survey indicates that the percentage of companies having recreation increases as the number of employees increases (page 25).

ADMINISTRATION

1. The general practice is to have either the company or the company benefit association finance the industrial recreation program (page 27).

2. Forty-five per cent of the companies surveyed spent less than \$2,000 per year on their recreation program. Thus it is evident that the expenditure per employee is very small. This limited outlay would in part account for the small range of recreational activities found in the majority of the programs studied.¹ Nevertheless, two per cent of the companies spent \$40,000 or more per year. Accordingly these companies have a much more elaborate program in terms of money expended as well as number of activities provided (page 28).

3. Funds allotted to industrial recreational programs are so small per employee that the salary of the individual is not likely to be affected. The average weekly recreational cost per employee for all companies having 6 to 20,000 or more employees (page 29) is 14 cents.

4. The industrial recreational program may be partially financed by revenue-producing activities such as dancing and bowling (page 30).

5. Two hundred and four companies of the 245 (83%) having

¹ See Chapter V, Program, pages 38-52.

recreational programs did not provide a medical examination for those participating in strenuous sports (page 31).

6. The survey results show that 148 companies (60%) did not offer any accident protection for participants (page 31).

7. Co-ordination among the various recreational groups is apparent from the results of this survey. The personnel officer and an appointed committee of employees were most frequently found as the administrative combination.

Seventy-five per cent of the companies administered the program through an individual department. Of the non-volunteer administrators, the personnel officer most frequently directed the program. Of the volunteer administrators, the employees administered the activities most frequently (page 32).

8. Forty-three per cent of the companies studied had either part- or full-time leadership (page 34).

9. An important result of this survey was the discovery that 33 per cent of the recreational leaders were trained in personnel work, while 22 per cent were college-trained in physical education. On the other hand, the existing belief that a large percentage of industrial recreational programs was directed by "name players" was not found to be true (page 36). (By "name player" is meant a star athlete not specifically trained in recreation.)

10. In those companies where the direction of the program was not centralized under a part- or full-time director, the average number of activities offered for the employees per company was less (page 36).

PROGRAM

1. Bulletin boards were used more frequently than other methods of informing employees as to future program activities (page 38).

2. The outstanding physical sports participated in by the men, according to company participation were: bowling (87% of the 245 companies having a recreation program), softball (74%), basketball (54%), golf (40%), and baseball (34%). Football and deck tennis were the two physical sports having the lowest percentage (1%) of company participation (page 39).

3. Thirty-five per cent of those companies having recreation provided bowling for women (page 39).

4. The outstanding activities established on a co-recreational basis were: bowling (9%), golf (5%), and tennis (5%) (page 39).

5. Bowling ranked first in the number of companies having family participation, but only 5 per cent of the companies sponsored this type of participation (page 41).

6. Men who engaged in bowling were most frequently (34%) between the ages of 30 and 34. Forty-three per cent of the women participants in bowling were between the ages of 20 and 24 (page 40).

7. Physical activities sponsored by companies which have all age groups participating are: bowling, golf, ping pong, and rifle or pistol shooting (page 40).

8. The greatest number of teams were reported in bowling. The results show that this sport had as many as 600 teams in a single company. Golf, softball, tennis, and ping pong are other physical activities with a large number of teams (page 40).

9. Employee competition in industrial recreation was 69 per cent interdepartmental, while 31 per cent of the employee participants competed in team sports which were between companies (page 43).

10. It is evident that 52 per cent of industrial recreation of a physical type was promoted by the employees. The firm promoted physical activities 33 per cent of the time. Tax-supported and private agencies promoted these activities to a degree of 6 per cent. Union groups promoted physical recreational activities in a few cases (1%) (page 44).

11. Camera clubs, classified as a cultural activity, ranked first in number of companies having this activity. Twelve per cent of the companies provided such clubs for men and seven per cent provided them for women. Six per cent of the companies had camera clubs for mixed groups (page 44).

12. The highest percentages of participants in cultural activities as a whole were between 35 and 39 years of age (page 44). The employees promoted 62 per cent of all cultural activities, while the firm sponsored 33 per cent (page 44).

13. Although there were very few other outing activities carried on by industries, picnics were held by 245 (100%) of the companies (page 48).

14. The average age of men and women in outing activities was between 20 and 35 years of age (page 48).

15. The promotional group for outing activities was, in 69 per cent of the cases, the employees. Nevertheless, picnics were sponsored by the firm (67%) slightly more often than by the employees (62%) (page 49).

16. Dancing was the outstanding company social activity participated in by all groups (page 49).

17. Participation ages of men and women in social activities varied according to the activity. For example, the ages of participants in dancing were 25 years and over, while the participants in bingo were 30 and over (page 49).

18. Sixty-eight per cent of the companies having recreational programs reported that the employees promoted the social activities, while 27 per cent of the social events were promoted by the firm. Dancing and social parties were also the outstanding activities promoted by the other listed agencies (page 51).

19. The activities that were most popular during lunch periods were: (in the order of their importance) cards, horseshoes, checkers, softball, musical programs, ping pong, and bowling (page 51).

FACILITIES AND EQUIPMENT

1. The outstanding facilities provided by the company were: baseball fields, softball fields, tennis courts, and billiard facilities (page 53).

2. Bowling alleys and golf courses seem to have been the outstanding commercial facilities used by the industrial personnel (page 53).

3. The Y. M. C. A., the Y. W. C. A., and similar organizations, most often provided facilities for basketball and bowling (page 53).

4. Softball fields were the outstanding tax-supported facilities used by the company's recreational participants (page 54).

5. With regard to the furnishing of personal equipment, certain provisional policies exist in industrial recreation. For a representative team, the company usually purchases the uniforms. This policy depends, however, on the particular sport engaged in (page 54).

6. Softball, basketball, and baseball were the activities for which the game-equipment was not often provided by the company. The individual employee or the employees' association most frequently purchased this equipment (page 56).

STATED VALUES OF RECREATIONAL ACTIVITIES

1. The greatest percentage of company recreational leaders regarded physical activities as most popular. Social and out-of-door activities were next in popularity, with cultural activities considered last (page 57).

2. Bowling was listed as the outstanding activity in promoting good fellowship. Other activities that were considered by recreational leaders as promoters of fellowship were (in the order of their importance): softball, basketball, baseball, and golf (page 57).

3. Twenty per cent of the companies stated that they had not experienced any labor difficulties. By contrast, there were 27 per cent of the companies which had had such trouble; of these, eighteen per cent continued their recreational programs during labor difficulties and 9 per cent did not (page 59).

4. Fifty-six per cent of the recreational leaders indicated that they considered their program inadequate. There were, however, 90 (37%) company recreational directors who believed that their program was adequate (page 60).

5. The outstanding stated causes for inadequate programs were:

- a. Lack of company facilities and equipment.
- b. Employees living too far from plant.
- c. Lack of diversified recreational program.
- d. Insufficient number of employees.
- e. Lack of good leadership (page 61).

6. Seventy-nine per cent of the recreational leaders believed that the recreation program established a friendly feeling between employer and employee which otherwise might not have been present. In contrast, 4 per cent of the recreational directors believed that recreation programs did not improve employer-employee relationships (page 62).

7. The outstanding values accrued from recreation as listed by recreational leaders were as follows:

- a. Improvement of employer-employee relations, good will.
- b. Better interdepartmental co-operation and fellowship.
- c. Better use of energy during free time.
- d. Means of developing physical fitness (page 63).

CURRENT FINDINGS IN INDUSTRIAL RECREATION

As a result of the present survey, *new* information has been made available for the first time. These new findings would be included under the following:

1. Expenditures for the recreation program in terms of the size of the company (page 28).
2. The type of leadership and its relationship to the extent of the program (pages 32-37).
3. An analysis of the recreational program as related to (pages 39-52):
 - a. Extent of the company program in physical, cultural, social, and outing activities for men, women, and mixed and family groups.
 - b. The range of age participation in each of the recreational activities.
 - c. The extent of interdepartmental and intercompany competition.
 - d. The group or agency that promotes the various activities.
4. The group or agency that provides facilities and equipment for the numerous recreational activities (pages 53-56).
5. An evaluation of the benefits of the various industrial recreation activities (pages 57-64).

CHAPTER II

INTRODUCTION

The title of this monograph, "Industrial Recreation," presents a problem of definition, explanation, and delimitation. The phrase is often heard and as often carries different complications. Certain implications and theories should clarify the meaning that is ascribed to the phrase in this presentation.

Recreation deals with a kind of activity that is engaged in without compulsion and usually brings immediate and direct satisfaction to the participant. It is not the antithesis of work; rather it complements work. For some, work is recreation, as in the case of Thomas Edison; for others it is drudgery. When work is satisfying and engaged in without compulsion, it may be considered recreation.

Industrial recreation is a phrase that locates recreation in a specific area of living. In short, it deals with satisfying activities carried on for, or promoted by, employees in the numerous lines of business endeavor. These recreational activities range from such passive types as stamp collecting or chess to the more vigorous types such as basketball, baseball, and the like. They should include activities discussed herein under the classification of physical, social, cultural, and outing types of recreational activities.

Furthermore, the current use of the phrase indicates a felt need for recreational activities in industry. This need has been steadily increasing during the last decade. In the early days of the industrial revolution, recreation for the worker was not considered important because of occupational specialization. Long hours of hard work left little or no time for leisure. Much progress has been made in industry since the beginnings of the industrial revolution. As a result of scientific management, the invention of machines, and consequent shorter hours of work, the laboring man and management have been confronted with the problem of the constructive use of leisure time.

G. S. Watkins states that, "During the nineteenth century industrial development proceeded so rapidly in Europe and America that the necessity of protecting and conserving the human element in production was scarcely recognized. Economy in the application of capital, replacing of worn-out machinery and conservation of natural resources received careful consideration. Waste of human life, accumulation of fatigue and destruction of health in industry received no such attention."²

² G. S. Watkins, *Labor Problems*; New York, Thomas Crowell Company, 1921; p. 324.

L. P. Jacks indicates that conditions have changed in industries, observing that, "The art of living is one and indivisible. . . . A master in the art of living draws no sharp distinction between his work and his play, his labour and his leisure, his mind and his body, his education and his recreation. What the world needs today is their union in practice. Make recreation coordinate with a man's work. Industrial leadership and recreational leadership, these two are intimately connected."³

HISTORICAL REVIEW OF INDUSTRIAL RECREATION

With this study of the present status of industrial recreation it was deemed advisable to include some developmental history of the field as obtained from certain previous studies. Such material should provide broad comparisons as to the extent and depth of programs in industry during the past three decades. The studies previously conducted have been concerned for the most part with surveys of industries within a specific city or state, and intensive studies of a specific type of industry or of a selected group of industries in selected states. With but a few exceptions, the information obtained in the past on recreational activities has been a part of broader studies on welfare activities in industry.

The first survey of importance was conducted in 1913 on "Employer's Welfare Work"⁴ This research involved case studies of 51 companies, of which 53 per cent had recreation in connection with their welfare work. The report is significant in that it shows that even in 1913, employers were considering recreation as an important part of industrial welfare work.

In 1916, Lebert H. Weir⁵ made a study on Vocational (Industrial) Recreation in Indiana. This state survey, one of the first ever attempted in the field of industrial recreation, covered 150 industrial organizations in the large cities of Indiana: namely, Fort Wayne, South Bend, Gary, Columbia City, Muncie, Evansville, and Indianapolis. For his survey, Weir studied vocational reports from 110 companies in Indianapolis and 31 organizations elsewhere.

This study shows that baseball was the most popular physical activity, thirty per cent of all the firms studied having regular organized

³ L. P. Jacks, *Education Through Recreation*; New York, Harpers, 1932; p. 1.

⁴ Elizabeth I. Otey, *Employer's Welfare Work*; Washington, D. C., United States Bureau of Labor Statistics, Whole Number 123, 1913.

⁵ L. H. Weir, "Vocational Recreation in Indiana, 1916"; Bloomington, Indiana, *Indiana Bulletin of the Extension Division, Indiana University*, Volume III, No. 5 (January, 1918).

teams. Bowling ranked a close second, twenty-nine per cent of the companies providing bowling facilities.

"Twenty-nine firms reported having weekly, monthly, or occasional talks and lectures.

"One firm reports dramatic activities—a form of recreational culture activity deserving of much more extensive encouragement than it has apparently received.

"Of the firms reported upon, 3 reported choral societies; 7 have organized bands, with a total of 135 instruments.

"The value of providing wholesome recreation in developing *esprit de corps* and mutual acquaintanceship through engaging in common activities cannot be over-estimated."

There is a very great need for recreation in an industrial community. In many cities where the industry is the only organization promoting recreation, the company has an obligation to its employees. Human material has to be treated carefully for effective productivity. A. H. Wayman,⁶ realizing the importance of recreation in connection with man's work, made a study of this subject. He studied the various communities where the Carnegie Steel Company was located. In his article he emphasizes the fact that somebody has to teach the foreign-born to be Americans through play. The conclusions of Wayman's report are suggestive:

"There are three important factors that have been strengthened through the installation of Industrial Athletics.

"First—There has been a noticeable change in physical alertness of employees.

"Second—Through interdepartmental and interplant competition has grown a better spirit of true sportsmanship.

"Third—A closer welding of the heterogeneous groups of employees, together with a closer and more friendly relationship between workers, foremen and superintendents."

In explaining the three factors derived from industrial recreation, Mr. Wayman states: "A stronger feeling of loyalty on the part of the employees now exists in the plants where recreation is fostered, which has developed efficiency and the spirit to pull together. Efficiency and the spirit to pull together are essential factors in the success of our industry."

⁶ A. H. Wayman, "Recreation in Industrial Communities"; *American Physical Education Review*, Volume 24 (December, 1919), pp. 473-80.

One of the earliest and most comprehensive studies of welfare work concerned with recreation for employees in industrial establishments was conducted by the United States Bureau of Labor Statistics⁷ over a period of twelve months, in 1916-1917. Thirty-one states were visited in connection with the study. The investigation did not extend to the Pacific Coast, Utah and Arizona being the most westerly states visited. Schedules were secured for 431 establishments; all but 7 of these reported the number of employees, the aggregate approximating 1,662,000.

TABLE 18

NUMBER OF ESTABLISHMENTS HAVING CLUBHOUSES, GYMNASIUMS, AND OTHER RECREATION FACILITIES, BY INDUSTRY

Industry	Establishments Having Recreational Facilities		Number of Establishments Having			
	No.	No. of Employees	Club-houses or Club-rooms	Billiard or Pool Rooms	Bowling Alleys	Gym-nasi-ums
Automobile	3	24,001	2	2	3	...
Foundries and Machine Shops	19	59,787	14	8	11	4
Iron and Steel	7	33,941	7	3	1	3
Gas, Electric Light, and Power	6	21,432	6	3	3	...
Mining, Coal	5	18,552	4	4	2	...
Mining, Other Than Coal	7	11,536	7	6	6	2
Offices	7	13,085	6	3	2	2
Railroads, Electric	14	57,210	14	11	4	4
Railroads, Steam	8	354,525	8	7	7	7
Stores	13	33,396	11	2	2	1
Textiles	23	23,818	22	6	6	12
Other Industries	40	205,256	36	19	16	17
Total	152	856,539	137	74	63	52

⁷ *Welfare Work for Employees in Industrial Establishments in the United States*; Washington, United States Bureau of Labor Statistics, Whole Number 250, February, 1919.

⁸ *Ibid.*, p. 73.

TABLE II9
NUMBER OF ESTABLISHMENTS HAVING SOCIAL GATHERINGS, LECTURES, MUSIC, ETC., BY INDUSTRIES

Industry	No. of Establishments	No. of Employees	Number of Establishments Having					Outings
			Social Gatherings	Lectures	Moving Pictures	Auditoriums	Music Clubs	
Automobiles	5	75,114	4	...	...	1	6	5
Boots and Shoes	4	21,180	4	2	1	...	3	2
Chemicals and Allied Products	4	9,163	3	1	1	...	5	3
Clothing and Furnishings	9	8,833	9	2	2	...	3	1
Electrical Supplies	5	77,733	4	2	1	...	6	2
Fine Machines and Instruments	5	15,031	4	6	1	...	4	3
Food Products	8	13,786	7	2	1	...	11	4
Foundries and Machine Shops	28	82,742	17	14	4	9	5	15
Gas, Electric Light, and Power	8	23,268	7	3	1	2	2	6
Iron and Steel	9	103,435	4	6	2	1	4	8
Offices	9	13,814	9	5	1	2	1	5
Paper and Paper Goods	4	6,332	4	1	...	...	1	2
Railroads, Electric	14	54,640	11	9	...	5	6	13
Railroads, Steam	7	352,774	7	1	4	6	...	1
Rubber and Composition Goods	6	35,088	6	1	...	...	1	5
Stores	28	81,490	26	6	1	...	11	18
Telegraph and Telephone	7	35,083	7	3	...	...	2	8
Textiles	35	38,673	27	12	...	8	18	16
Other Industries	44	122,203	28	18	12	29	15	24
Total	239	1,170,382	188	94	32	63	103	141

This report by the United States Bureau of Labor Statistics is concerned with all phases of welfare work. Where the totals of the specific columns or activities do not amount to 431, the explanation is that some establishments did not report having this division of welfare work. With regard to recreation, some companies had all branches and types of facilities and activities, while others had few or none. The divisions studied included provisions by the organizations for health measures for employees, lunch rooms and restaurants, indoor and outdoor recreation, education, disability funds, pensions, group insurance, and various welfare activities.

Table I indicates the number of industrial establishments having various indoor recreational facilities for their employees.

The report also contains detailed discussion of the facilities provided by these companies and the service which they were rendering their employees (Table II).

"In the following table the number of companies having outings or providing baseball grounds, tennis courts, or athletic fields for employees are given by industries.

TABLE III¹⁰
NUMBER OF ESTABLISHMENTS HAVING OUTDOOR RECREATION FACILITIES AND
OUTINGS FOR EMPLOYEES, BY INDUSTRIES

Industry	Establishments Reporting		No. of Establishments Having			
	No.	Employees	Baseball Grounds	Tennis Courts	Athletic Fields	Outings
Automobiles	5	22,881	4	1	...	5
Foundries and Machine Shops	29	71,566	20	16	4	15
Gas, Electric Light and Power	7	23,502	6	6	1	6
Iron and Steel	14	109,007	11	8	5	8
Mining, Coal	7	25,054	7	2	...	...
Mining, Other Than Coal	6	11,261	3	4	...	...
Offices	5	11,140	4	2	...	5
Railroads, Electric	8	46,451	8	1	1	13
Railroads, Steam	3	279,032	2	2	1	...
Stores	18	58,461	12	8	3	18
Textiles	30	34,264	25	5	2	16
Other Industries	87	257,773	50	34	11	54
Total	219	950,392	152	89	28	140

¹⁰ *Ibid.*, p. 89.

"Two hundred and nineteen companies, or practically one-half of the establishments for which schedules were taken, report facilities for outdoor recreation or outings which are held regularly at least once a year."

One of the first studies made on industrial recreation for women was prepared in 1921 by Dorothy Schaper.¹¹ Schaper made inquiries of 101 companies by use of the questionnaire technique. She sent questionnaires to organizations known to have recreational programs as well as to other concerns to determine whether anything appreciable was being attempted in industry. The results of this survey are as follows:

"The firms provided with recreation rooms and buildings make the most of them and encourage sports and other forms of recreation to the fullest extent. Bowling, basketball, and tennis seem to be the most popular games participated in by women employees. Volleyball is also becoming more popular. . . . It is surprising how many believe in having the employees manage their own games and amusements.

"There are five fundamental principles to be kept in mind from the beginning:

1. "Recognition on the part of the firm that such a program is important enough to demand to a lesser degree the personal interests, study, and attention of one or more members of the firm.
2. "The program and ideals aimed at should suit the various facilities and activities.
3. "As far as possible, the employees should assume the management of the facilities and activities.
4. "There must be no suspicion that measures of this nature are designed to take the places of wages, nor should the employees be made to think that they are participants of welfare work.
5. "The employers' interest in such measures should be deeper than that of personal gain."

The conclusions made by Miss Schaper are well worth repeating:

"The relationship between the employers and employees in the concerns will be strengthened and a greater interest in the work will result. The most important part that the employers can plan in a recreational program is to provide all modern facilities for the employees and the employees will do the rest. By doing this, an industrial concern may do much to promote the physical and moral life of its employees and to improve the home conditions of the surrounding community, at the same time maintaining a healthy, interested and efficient working force."

¹¹ Dorothy Schaper, "Industrial Recreation for Women"; *American Physical Education Review*, Volume 27 (March, 1922), pp. 103-13.

The 1916-17 study conducted by the United States Bureau of Labor Statistics¹² was followed by a similar survey,¹³ which was completed in 1926, for the purpose of observing the ways in which various kinds of welfare work had developed during the intervening ten years.

"Reports from 430 establishments showed that 319 of them had recreation facilities and programs of some sort. The details are as follows:

<i>Indoor Facilities</i>	<i>Number</i>	<i>Percentage</i>
Club Houses	82	19
Recreation Rooms	142	33
Billiard Rooms	89	21
Game Rooms	111	26
Bowling Alleys	80	19
Gymnasiums	67	16
 <i>Outdoor Facilities</i>		
Athletic Fields or Diamonds.....	157	37
Tennis Courts	50	12
Golf Courses	13	32
Summer Camps	33	37
 <i>Athletic Teams, Etc.</i>		
Athletic Clubs	59	14
Baseball Teams	223	52
Football or Soccer Teams.....	41	10
Annual Picnics and Other Outings.....	177	41
 <i>Promote Social and Cultural Activities</i>		
Dances and other Social Activities.....	316	74
Lectures	65	15
Moving Pictures	61	14
Bands	103	24
Orchestras	86	20
Glee Clubs	66	15
Concerts	154	36

The Metropolitan Life Insurance Company issued in 1927 a booklet entitled *Winter Recreation for Employees*,¹⁴ summarizing the provision

¹² *Welfare Work for Employees in Industrial Establishments in the United States*; Washington, United States Bureau of Labor Statistics, Whole Number 250, February, 1919.

¹³ *Health and Recreation Activities in Industrial Establishments*; Washington, United States Bureau of Labor Statistics, Whole Number 458, 1926.

¹⁴ *Winter Recreation for Employees*; New York, The Metropolitan Life Insurance Company, 1927.

which is being made by many industrial concerns in the way of providing facilities and activities for their employees. In many respects the findings are quite similar to those of the study conducted by the Bureau of Labor Statistics.¹⁵ In addition to describing the types of activities which have proved most popular, the report contains reference to a large number of companies and to the programs which they are carrying on for their workers.

In a discussion of the various types of activities, bowling is listed as being the most attractive. "Women are as enthusiastic about it as men, and there is no age limit. Among younger workers, basketball rivals bowling. Of the individual sports, boxing and wrestling are highly popular. Indoor baseball is a game that deserves greater popularity. Music and dramatic clubs are discussed and also the semi-education and social clubs."¹⁶

The National Industrial Conference Board in 1929 published a report entitled *Industrial Relations Programs in Small Plants*.¹⁷ This report included a study of 4,409 plants, each of which had fewer than 200 employees but which together employed a total of 419,391 workers. Industrial relations programs were classified under seven headings, one of which was "Rest and Recreation." The study revealed that rest rooms, noon-hour recreation, athletic teams, and picnics are fairly common in small plants although they are provided in relatively smaller numbers than are most of the other industrial relations activities. In fact, the average percentage of companies providing all of the fourteen recreational activities and facilities listed was only 7 per cent. Very few provided club houses, motion pictures, drama, and music groups. Among the various industries included in the study, public utilities companies provided the greatest percentage of recreational programs. The size of the city had relatively little effect upon the provision of recreation facilities.

A few industrial recreation surveys have been made concerning certain cities. E. T. Lies conducted such a survey of Indianapolis. He studied 159 industries of this city and found the following material important to include in his report.¹⁸

¹⁵ Op. Cit.; United States Bureau of Labor Statistics, 1926.

¹⁶ *Winter Recreation for Employees*; New York City, The Metropolitan Life Insurance Company, 1927.

¹⁷ *Industrial Relations Programs in Small Plants*; National Industrial Conference Board, 1929.

¹⁸ E. T. Lies, *The Leisure of a People*; Council of Social Agencies of Indianapolis, Indiana, 1929; pp. 472-473.

"Of the 159 concerns covered in our study 94, or 59 per cent, reported either facilities available or activities promoted or both while 65, or 41 per cent, reported they had nothing and promoted nothing. One-third of the latter group were downtown establishments with less than 150 employees each. Only a few firms having no facilities have more than 300 employees.

"The scope of things represented in the list which follows is broad. Physical activities like baseball, basketball, bowling, horse-shoes, golf, are the most outstanding. Other types of recreation, however, have not been neglected, as is attested by the number of libraries and reading rooms, bands, orchestras and glee clubs, dances, minstrels, plays and amateur circuses reported.

"As far as we were able to ascertain none of the 159 firms canvassed maintains camps for employees.

Summary of Industrial or Vocational Recreation in Indianapolis

<i>Facilities</i>	<i>Number</i>	<i>Percentage</i>
Gymnasiums for Men.....	2	1
Gymnasiums for Women.....	1	1
Tennis Courts	14	9
Baseball Diamonds	8	5
Horseshoe Courts	28	18
Athletic Fields	8	5
Volley Ball Equipment.....	3	2
<i>Social or Cultural Activities</i>		
Social Rooms (smoking rooms, etc.)....	41	26
Bands	3	2
Orchestras	7	4
Reading Clubs	3	2
Library or Reading Room.....	12	8
<i>Athletic Activities</i>		
Firms Backing Inter-Shop Athletics.....	24	16
Baseball Teams (connected with plant)...	21	13
Basketball Teams (connected with plant)	17	11
Bowling Teams (connected with plant)...	34	21
<i>Leadership</i>		
Firms having educational or recreational director who has charge of all athletics	11	7
Permanent athletic committee.....	1	1
Safety manager directs athletics.....	1	1
Special committees appointed for all functions	1	1

The percentages were all figured on the number (159) of case studies made.

A. D. Cloud, editor of the Industrial Medicine Publishing Company, was consulted with regard to the report on "Recreational Activities in

the Winter Months.”¹⁹ This study has general statements concerning the kinds of activities which are most popular for a winter program. Some of the suggested activities are as follows:

“In reviewing the matter of possible recreational activities for the winter months, it seems that bowling is almost universally accepted as the most popular and appealing of indoor amusements.

“Next in popularity to bowling are music and dramatics. The glee clubs and choral societies seem to have the widest appeal to individuals, but plant orchestras or bands are probably more permanent and successful.

“From experiences it would seem that a winter recreational program may be launched through the promotion of a bowling tournament to be followed, after several weeks, by the promotion of chess and checker competitions, and still later, by the organization of an orchestra, band, or glee club, the idea being that enthusiasm for an activity wanes after a short time and must be sustained by an appeal to skill or knowledge along other lines.”

A condensed summary of an unpublished industrial recreation questionnaire study, made in 1934 by C. O. Jackson, is as follows:²⁰

“The study represents nearly one million employees in industries and companies located in 33 states and Canada. There were 584 letters sent out and 347 replies received. Of this number 104 stated they had no program. Two hundred twenty-seven questionnaires were received in reply to a second letter sent to those having programs, and of this number, 189 were filled out so they could be used in this summary.

1. “Present employment total varies from 10 to 18,000 with an average of 3,718.
2. “Hours worked daily average eight, with forty for the week.
3. “Organized programs exist in 123 cases, while 66 have good programs handled entirely by the employees.
4. “Programs have been discontinued in some cases due to the following reasons (in order): (1) finances, (2) lack of interest, (3) lack of organization.
5. “Available facilities for recreation are (in order): (1) playfields, (2) assembly halls, (3) club rooms, (4) gymnasiums (usual combination is playfields and assembly halls).
6. “Programs are financed (in order) by: (1) donations by the company, (2) voluntary subscription, (3) athletic club (most common arrangement includes the first two).

¹⁹ *Industrial Relations*; Beloit, Wisconsin, Industrial Medicine Publishing Company; Volume 2, No. 8 (September, 1931), pp. 294-295.

²⁰ C. O. Jackson, *Recreation in Industry*; Champaign, Ill., University of Illinois; unpublished study, 1934.

7. "Administration is carried on (in order) by: (1) employees, (2) member of office, (3) athletic club, (4) recreation director (usual combination is employees and department head).
8. "Supervision is carried on (in order) by: (1) voluntary leaders, (2) recreation director, (3) employees, (4) department head (combination of voluntary leaders and department head is most frequent).
9. "Cost of recreation per employee for the year varies from nothing to \$12 with the average being \$1.50 (only 67 companies gave a definite answer).
10. "Clubs of various kinds exist in 53 companies, while 83 have none. The type of club is (in order): (1) athletic, (2) recreation, (3) booster (53 concerns did not answer this).
11. "Activities included in the program are (in order of popularity): (1) baseball, (2) bowling, (3) basketball, (4) golf, (5) tennis, (6) picnics, (7) horseshoes, (8) social dancing, (9) ping-pong, (10) volley ball, (11) swimming, (12) bridge, (13) chess and checkers, (14) handball, (15) rod and gun.
12. "Training of the director varies and is (in order): (1) no special training, (2) coaching experience, (3) college degree, (4) athletic experience.
13. "Changes in the program are (in order): (1) expansion, (2) curtailment, (3) changed to fit present need.
14. "Special problems are (in order): (1) lack of facilities, (2) lack of funds, (3) lack of employee interest, (4) various work shifts.
15. "Questionnaire answered (in order) by: (1) personnel manager, (2) general manager, (3) recreation director. Length of time in present position varies from three months to thirty-four years, with an average of eight years.

"A number responding to the inquiry indicated that they no longer had a program for a variety of reasons which are listed below; however, it is generally recognized that one or several of the reasons which follow are the real underlying causes:

"1. *Paternalism*: The company makes a magnificent gesture (too often misinterpreted) and donates elaborate equipment, facilities, furnishes capable leadership, develops the program, and then says, 'Here it is, it's yours. Enjoy it!' Many employees become suspicious and distrustful and usually resent the fact that the company is giving them these things, instead of increasing wages. More important, however, is the fact that the employees do not have the opportunity to participate in the organization and development of the program. In the majority of cases trouble may develop and failure is the result.

"2. *Policy*: If the company is merely doing this to avoid labor trouble and is not at all concerned about the welfare of their employees otherwise, even the best program usually does not develop. If it is the plan to develop a program merely by signing up star athletes who will represent the company in industrial leagues, the man in the plant is not benefited and we again usually find failure. If it is worth doing, it should be something for everyone.

"3. *Activities*: If the company believes that athletics, either inter-plant or intra-plant will solve the problem, they are obviously in error. There is a drive and interest in competition which is both desirable and worthwhile, and this is especially helpful in starting a new program, but it must be realized that the great majority will enjoy the simpler and easier activities such as shuffleboard, dart baseball, box hockey, horse-shoes, and will probably find their greatest enjoyment in hobbies of all sorts, in social affairs, and in music and drama. Likewise, activities for the employees' families, particularly the children, must be provided as soon as possible. The best tie-up finds a personnel department developing an integrated program of recreation, welfare, and safety, and personal relations between employee and employer.

"4. *Over-expansion*: If the company tries to put in a broad comprehensive program over night, and expects it to work, even with employee co-operation, they usually run into trouble. The principle of introducing anything new is to start with relatively few activities known to many and gradually develop a program to reach everyone in the plant.

"5. *Leadership*: If the company turns the entire organization and supervision over to an employee or a company executive who has had little or no training in this type of work, there may be, and usually is, trouble ahead. A well trained, capable leader with the right personality who understands the needs, interests, and capacities of the group of employees with whom he is working is the main essential. He must secure their confidences, co-operation, and respect, and should lead, suggest, and encourage, rather than draw up the program and say, 'This is what we want you to do.'"

In order to answer the question as to what recreational activities are provided by industry, J. E. Walters,²¹ of Purdue University, with the co-operation of the National Industrial Conference Board and of Cornell University, made a survey of recreational activities as part of the larger study of personnel relations in industry under the National Industrial Recovery Act. The investigation covered 215 companies employing more than 484,000 persons and involved personal visits to 18 companies and survey-appraisal information from 197 companies. The median number of employees per company was 1,190, ranging from 220 to 40,000 em-

²¹ J. E. Walters, *Recreational Activities in Industry*; New York, National Recreation Association, Bulletin Service, Industrial Recreation Bulletin No. 9, July, 1935.

ployees per company. The companies were well distributed with regard to location and industrial classifications. The 128 personnel activities which were investigated included 11 recreation activities studied from the standpoint of increase or decrease in the percentage of companies maintaining them.

Seventy-six per cent of the companies reported that they maintained some recreational activities. All the activities but two (picnics and outings, and noon-hour activities) in this investigation showed an increase in the number maintained since the National Conference Board's study in 1929, the average increase in all of these activities being 12 per cent.

In 1939, Mr. Howard L. Vierow²² made a survey of industrial recreation in Chicago. The following findings are of interest:

"Included in this study were about 2,200 companies. Of these firms, 47 per cent had some type of recreational program of which approximately 80 per cent represented but one activity. Eighty-five per cent of all industrial recreation is in the form of athletics, and a breakdown of the athletics reveals that approximately one-third of all the companies had at least a softball or bowling team. About one-fifth of the companies had something in the way of a golf tournament or annual meet.

"This study included about 1,600 manufacturing companies and about 400 non-manufacturing companies, with about 85 per cent of the total employment in the city's business and industry. Of these, the group which represented employment of 700 persons or more per company had the largest percentage with recreational programs, or 75 per cent.

"The financial support for industrial recreation programs was derived from the following sources: in 268, the company took care of the entire expense; in 670 (or about one-third), the company and the employees or employee group shared the expenses; in 690, the employee organization benefit group, local of the union, or the union itself took care of the entire cost. It is significant that of 2,200 companies, the program was self-supporting in about 1,000. In those which were not self-supporting, the deficit was met by the employees in 190 cases and by the employer in 354 instances.

"Bowling and softball led in athletics with about one-third of the reporting companies. Golf followed, then horseshoes, with about one company out of every twenty having horseshoes as an activity. Billiards and pool, rifle and gun clubs, ping-pong and table tennis were found in one out of every ten industrial establishments in the city of Chicago.

²² H. L. Vierow, *Findings of Chicago Industrial Recreational Survey*; Chicago, Illinois, Chicago Regional Conference on Industrial Recreation, Lecture Reporting Service, 1939.

"In the cultural field, it was found that 44 organizations had a musical group or an organization in which music plays an important part. Twenty-two had a dramatic club, or an event of a dramatic nature in their annual programs. One out of every four companies had an annual affair—a picnic, an outing, a party, a banquet, or some special celebration. About 1 per cent of all the reporting companies had a house publication.

"I would like to conclude by suggesting that industrial recreation is growing in Chicago, that the number of industrial establishments offering such activities is increasing and that there is developing a healthy co-operation of management and labor with the public and private agencies involved in community recreation programs. I believe that through this conference this movement will be extended and that industrial recreation will be given additional impetus as one of the instruments in making our communities better places in which to live." ✓

CHAPTER III

EXTENT OF INDUSTRIAL RECREATION

In the previous chapter a brief review of studies in industrial recreation has been presented. Such information is valuable in light of the findings which will be presented hereafter. With due respect to the aforementioned material, the following chapters include much information not available before this study.

SCOPE OF THE SURVEY

Information was obtained as a result of (1) thirty personal interviews with industrial leaders whose companies were known to have outstanding recreational programs, and (2) 609 returned questionnaires.²³ Originally 2,486 questionnaires were mailed to a representative sample of all types of industry in every state in the union. The returns came from 38 states and 26 per cent of the companies originally contacted. The companies sending in replies employed up to 60,000 men and women, with an estimated total of 658,034 employees in the 639 companies surveyed.

It was evident from the returns that the replies represented in most cases the point of view of management. Nevertheless, several replies were received from directors of recreational programs conducted by organized labor. Both management and labor appreciate the potential values in a broad recreation program for the worker. Accordingly, the answers to the questions asked were fundamentally the same as regards stated values of industrial recreation.

Returns were received from industries employing a small number of workers as well as those employing 20,000 or more.²⁴ In light of the number of companies reporting in each of the employee levels, the general findings more closely approximate those conditions found in industries employing 51-2,500 workers.

RANGE OF ADMINISTRATIVE PROCEDURES

In order to obtain a broad general picture of the sources of these data, it seems wise to present in this chapter the following information: (1) the extent of the present industrial recreation program; (2) the influence of type of company on the presence or absence of a program;

²³ See copy of Questionnaire in Appendix, pp. 68-75.

²⁴ See Table VI, p. 25.

(3) the effect of the size of the company on whether a recreational program is or is not carried on.

Administrative Policies. In previous studies it was noted that recreational programs were reported by 53 per cent²⁵ to 76 per cent²⁶ of the companies studied. The present study, made on a random sample basis, indicates a much lower percentage of recreational programs (38 per cent). Thus, 62 per cent of the industrial organizations studied in this survey do not have a recreation program.

Though industry has as a whole definitely reacted against paternalism, the present study indicates that 70 per cent of the companies having recreation programs assisted the program financially. This does not mean, however, that these companies direct or control the program procedures.

TABLE IV
ADMINISTRATIVE POLICY ANALYSIS

Item	Yes	Per- cent- age	No	Per- cent- age	Total No. Companies
Have Recreational Program.	245	38	394	62	639†
Promote Program Financially	172	70	73	30	245*
Entirely Company Directed.	26	11			
Entirely Employee Directed	131	53			
Company-employee Directed	77	31			
Not Specified	11	5			
Totals	245*	100%			

† Percentages based on 639.

* Percentages based on 245.

The above analysis is verified by the fact that, of the programs, 53 per cent is directed by the employees, while only 11 per cent is directed by a company representative. In the latter case, it was clearly evident from case studies made that management offered recreational leadership when requested, but desired the employees to undertake and motivate their own program of activities. Thirty-one per cent of the companies directed their program co-operatively (company-employee).

²⁵ See page 8.

²⁶ See page 20.

Extent of Recreation by Type of Company. Many variables determine the presence or absence of an industrial recreational program. An interpretation of the following table reveals possible relationships between type of concern and the existence of a recreational program. Although there were more questionnaire returns from the machine group, only a third of these companies offer recreation for their employees. Companies manufacturing iron and steel products returned 21 per cent of the total questionnaires with the information that 38 per cent of them have a recreational program.

TABLE V
COMPANY COVERAGE BY TYPE

Type of Company	Number of Companies	Percentage Returns	Companies Without Programs	Companies With Programs	Percentage Having Programs
Iron-Steel Products	133	21	83	50	38
Electrical	47	7	22	25	53
Rubber	11	2	4	7	64
Machine-Machine Tools . . .	201	31	135	66	33
Chemicals-Oils	29	5	15	14	48
Automotive	28	4	8	20	71
Food Products	3	1	2	1	33
Textiles (Wood-Wool) . . .	94	15	66	27	29
Metal Products	60	9	39	21	35
Mercantile-Wholesale	5	1	4	1	20
Extraction-Refining	7	1	4	3	43
Service Industries	6	1	1	5	83
Not Specified	15	2	10	5	33
Totals	639	100	394	245	

Service industries (gas, electric, etc.) represented only 1 per cent of the total questionnaires received; nevertheless, 83 per cent have recreational programs. It may be noted from Table V that the automotive industry, returning 4 per cent of the questionnaires, ranks second (71 per cent) in offering recreation. The results further indicated that companies manufacturing rubber products provided recreation in 64 per cent of the companies manufacturing this product. Only 2 per cent of the total returns were reported from this classification.

If the hypothesis is accepted that the returns represented a good random sample, it should be concluded that recreation programs will be found most often in the following industries, in the order named: (1) Service, (2) Automotive, (3) Rubber, (4) Electric, (5) Chemical and Oils.

Extent of Recreation by Number of Employees. The distribution of returns from companies in the various employee levels tends to indicate a normal distribution, with the largest number of companies falling in the employee level of 101-500. The lowest and highest employee levels had practically the same number of companies reporting in each level: 11 in the lowest level (1-5 employees) and 7 in the highest level (20,000-up).

As would be expected, industrial recreation is infrequently carried on in companies having a small number of employees. Included in this classification are the companies having from one to fifty employees. Table VI shows that companies of this size provide recreation in the ratio of one to ten. Those companies which have from 51 to 500 employees have recreational programs in 57 per cent of the cases. The percentage of programs increases in this category as the number of employees increases. The tabulated results show that companies within the level (51-500) having 51-100 employees, and those having 101-500 employees conduct recreational programs to the extent of 46 per cent and 67 per cent, respectively.

TABLE VI
EXTENT OF RECREATION BY NUMBER OF EMPLOYEES

Number of Employees	Companies Reporting	Programs			
		Have		Do Not Have	
		Number	Percentage	Number	Percentage
1—5	11	1	9	10	91
6—20	58	5	9	53	91
21—50	56	5	9	51	91
51—100	61	28	46	33	54
101—500	137	92	67	45	33
501—2,500	78	69	88	9	12
2,501—10,000	21	20	95	1	5
10,001—20,000	4	4	100	0	...
20,001—up	7	7	100	0	...
Not Specified	206	14	7	192	93
Totals	639	245	...	394	...

Although fewer returns were received from companies having 501 to 20,001 employees (17 per cent), the percentage of companies offering recreation was much higher (96 per cent).

In order to determine the influence of the number of employees on the extent of company recreational programs, the total number of employees was computed from the 639 questionnaire returns. Those companies having programs (245) employed approximately 611,028 individuals. The approximate number of employees for the 394 companies (companies without a program) was 47,006. From these data it is evident that, in the main, the smaller companies do not tend to have an industrial recreation program.

CHAPTER IV

ADMINISTRATION

The efficiency of a program depends upon its administration. This holds true in industrial recreation as well as in other areas of industrial management. The problems to be discussed under this heading will be limited to the financial and personnel aspects of industrial recreation. It is of vital importance to management to know what is the present practice regarding finances in industrial recreation. Industrial leaders are also concerned with the matter of personnel for the direction or supervision of recreational activities. These questions and related ones will be discussed in the following chapter.

FINANCE

Since there are many possible methods of financing industrial recreation, it seems important to list and discuss those reported in the survey.

Through case studies it was noted that the majority of companies having programs did not use any one method of meeting their entire recreational cost. Instead they used various combinations. The fact that recreational programs were financed by the company (63%) is significant, as company benefit associations (60%), which are composed of employees, in many cases help finance the activities. The findings also indicate that concessions can be profitably used in supporting industrial recreation (55%).

TABLE VII
METHODS OF FINANCING

Methods	Companies Using Method	Percentage*
Bonds Underwritten	2	35
Company	170	63
Company Benefit Association	46	60
Union	6	53
Concessions	41	55
Paid Admissions	33	35
Entry Fee	36	48
Others	32	53

* Refers to the percentage to which various methods were used to finance the program; e.g., 170 companies financed 63 per cent of their recreation program from company funds.

Thirty-three companies financed their recreation program to the degree of 35 per cent by charging admissions for athletic contests. This total indicates that companies do not obtain much money from spectators.

Expenditures for Recreation. Since adequate programs of industrial recreation demand financial outlay, it is evident that the majority of companies studied had a very restricted program in recreation for their employees. Forty-five per cent of the companies spent less than \$2,000 a year on their program. Sixteen companies (7%) spent more than \$2,000 and less than \$5,000 on their program. Thirteen companies (6%) spent from \$5,000 to \$39,999 for recreation.

TABLE VIII
ESTIMATED YEARLY EXPENDITURES FOR RECREATION

Dollars Expended	Number Companies Reporting	Percentage
0—499	76	30
500—999	21	9
1,000—1,999	15	6
2,000—2,999	7	3
3,000—3,999	6	3
4,000—4,999	3	1
5,000—9,999	6	3
10,000—19,999	3	1
20,000—39,999	4	2
40,000—59,000	2	1
60,000 and up	3	1
Not Specified	99	40
Totals	245	100

The case studies demonstrated that the most elaborate industrial recreational programs were carried on by companies spending more than \$40,000. Two per cent of the companies studied spent \$40,000 or more.

Employee Recreational Costs. The progress of industrial recreation, in many cases, has been retarded because employees believe that such activities decrease their salaries. This belief has been refuted by studies made in the past.²⁷ The following discussion and tabulations also indicate

²⁷ See Chapter II, page 7.

that the funds devoted to industrial recreation programs are so small per employee that the salary of the individual is not likely to be affected.

Only 11 companies with less than 51 employees had a recreational program. As would be expected, companies of this size spend the least amount for recreation per company, but the estimated cost per employee is much higher.

The estimated cost *per employee* in companies having 51-500 employees is approximately six cents a week for industrial recreation activities. Companies of this size (51-500) are most numerous according to the United States Bureau of Labor Statistics.

TABLE IX
ESTIMATED RECREATION COST PER EMPLOYEE

Number of Employees	Number Companies Reporting Expenditures	Estimated Yearly Cost		Estimated Weekly Cost
		Total Expenditures of Companies Reporting	Per Employee	Per Employee
6—20	2	\$1,000	\$38.44*	\$0.74
21—50	2	500	7.14	.14
51—100	13	3,750	2.82	.05
101—500	57	50,000	2.92	.06
501—2,500	48	132,750	1.84	.04
2,501—10,000 ...	11	183,250	1.06	.02
10,001—20,000 ..	4	108,500	1.81	.03
20,001 and up....	3	105,000	.87	.02
Total	140	3,000	...	...

* From the above table the average number of employees was arrived at by taking each step interval (e.g. 6-20), finding the average, and then multiplying by the number of companies involved (e.g., 13×2). The total expenditures of these companies were then divided by the total arrived at above (e.g., $1000 \div 26$).

Table IX reveals that companies having more than 500 employees extensively finance their recreation programs. Although the total cost is high for this employee level, the recreational cost for each employee is very low. The average recreational cost per employee in companies with more than 500 employees is 3 cents a week.

From the results shown in Table IX it can be seen that the estimated yearly cost per employee in companies employing from 6 to 20 employees is \$38.44. No doubt this high cost is due to the fact that the individual recreational cost varies inversely with the number of employees. Thus, the high individual recreational cost mentioned above is natural. The estimated yearly recreational cost per employee in companies employing more than 20 employees is approximately \$2.64.

Activities Providing Revenue. Industrial recreation may also be partially financed by revenue-producing activities. Of the 245 companies having programs, 40 did not obtain money from any activity. Companies that did secure monies from specific activities considered dancing and bowling as outstanding revenue-producing activities. Other activities which were revenue-producing are listed according to their importance as follows: bingo, concessions, softball, billiards, basketball, baseball, boxing, and swimming.

TABLE X
REVENUE-PRODUCING ACTIVITIES

Activities	Number of Companies Reporting	Rank
No Revenue Obtained	40	1
Dancing	19	2
Bowling	10	3
Bingo	7	4
Concessions	6	5
Billiards	5	6
Softball	5	7
Basketball	4	8
Baseball	3	9
Boxing	2	10
Swimming	1	11
Others	17	..

From Table X, it may be assumed that, in the main, activities which are competitive in nature and those which attract spectators and participants may produce funds to carry on partially the industrial recreation program.

MEDICAL AND INSURANCE PROCEDURE

Medical. Since accidents are costly to the employer and employee, it would appear that medical examinations for recreational participants would financially benefit all concerned. Former studies²⁸ reveal that medical examinations of participants reduced sport accidents and consequently that such examinations are a predominating factor in the reduction of recreational accident costs.

TABLE XI
MEDICAL EXAMINATION FOR STRENUOUS SPORTS

Medical Examination	Number Companies Answering	Percentage
Yes	19	8
No	204	83
Not Specified	22	9
Totals	245	100

As may be seen from Table XI, 19 companies (8%) give a yearly medical examination for participants in strenuous sports, although 22 companies (9%) did not answer this question. Hence, 204 companies (83%) having recreational programs did not provide a medical examination for those in strenuous sports.

Athletic Injury Insurance. Since 83 per cent of the companies did not offer recreational participants medical examinations, the extent of insurance protection for the sport participant was of interest.

TABLE XII
INSURANCE FOR ATHLETIC INJURIES

Insurance Provisions	Number Companies Reporting	Percentage of Total
Yes	77	31
No	148	60
Not Specified	20	9
Totals	245	100

²⁸ Lloyd, Deaver, and Eastwood, *Safety in Athletics*; Philadelphia, Pa., W. B. Saunders, 1936, page 207.

In response to this question, the survey results show that 148 companies (60%) did not provide any accident protection.

Seventy-seven (31%) companies provided insurance protection against athletic injuries. There are two possible ways by which these companies might have provided such insurance protection: (1) by group insurance, and (2) by company benefit associations which offer provisions for recreational accidents.

Because accidents may be a financial burden to employee and employer, companies should realize the liabilities incurred by sponsoring recreational activities. Each one of the companies not carrying insurance unknowingly assumes full responsibility for recreational accidents.

LEADERSHIP PROCEDURES

Two possible types of leadership may be involved in an industrial recreational program: (1) volunteer groups (appointed committee of employees, group of volunteer employees, trade union committee, committee of both employees and employers); and (2) non-volunteer workers who are paid by the company, by governmental agencies, or by some other group interested in promoting recreation.

Divisional Direction. Co-ordinated direction by the various administrative groups is apparent from the results of this survey. The personnel officer and an appointed committee of employees made up the outstanding administrative combination. Another group which cooperatively directs recreation is the appointed committee of employees and the employees who volunteer their services.

Twenty-six per cent (64) of the companies having programs combined efforts in administering their recreation activities. The remaining 74 per cent (181) of the companies administered the program through a special group. Of the non-volunteer administrators, the personnel officer most frequently directs the program, although 11 companies employed a director of recreation.

There are many volunteer organizations that may administer recreational activities. The results show that the employees, either as an appointed committee or as a group of volunteers, administered the activities more often than other administrative groups. This tendency for employees to organize their own activities was encouraged by employers who were consulted.

Full-Time Leadership. The emphasis placed on the program would in part be known by the type of leadership provided. With this thought

TABLE XIII

PROGRAM ADMINISTRATION

Administrative Title	Number Companies Reporting										
	Individual Method†	Combination Methods*									Combination Totals
		1	2	3	4	5	6	7	8	9	
*1. Director of Recreation	11	1	1	1	3	2	2	2	2	7	
2. Personnel Officer	20	1	1	11	4	1	1	1	1	17	
3. Company Officer	3	1	1	4	1	1	1	1	1	4	
4. Appointed Committee of Employees.	46	1	11	4	9	1	1	3	3	38	
5. Group of Volunteer Employees.	76	3	4	1	1	1	1	2	2	11	
6. Trade Union Committee.	3	1	1	1	1	1	1	1	1	2	
7. Committee of Both Employees and Employers.	19	2	1	3	1	1	1	1	1	7	
9. Privately Supported Agency	1	1	1	1	1	1	1	1	1	0	
9. Tax Supported Agency	2	1	1	1	2	1	1	1	1	2	
Totals	181	1	1	1	1	1	1	1	1	88	

* Numbers Represent Organization Divisions; e.g., 1 equals Director of Recreation.

† Number of Companies Using One Method of Administration.

in mind, information was requested as to whether the leader gave his or her entire efforts to the program. Summarization of this information follows:

Forty-three per cent of the companies studied had either part- or full-time recreational leadership for their employees. The remaining 57 per cent of the companies obtained leadership for their programs from voluntary groups, and tax-supported or private agencies.

TABLE XIV
TYPE OF RECREATIONAL LEADERSHIP

Items	Man Director		Woman Director		Totals	Per-centage
	Part-Time	Full-Time	Part-Time	Full-Time		
Yes	82	13	5	6	106	43
No .....	..	..	..	..	136	56
Not Specified .....	..	..	..	..	3	1
Totals .....	..	..	..	..	245	100

Recreational directors, of whom 13 were men, were employed full time in 19 companies. There were also 87 companies offering part-time recreational supervision; 82 of the leaders in these companies were men.

Part-Time Leadership. A remarkably large number of companies had part-time leadership; in this group 69 per cent of the recreational supervision was carried on by men and women in the personnel division

TABLE XV
PART-TIME LEADERSHIP

Department	Companies Reporting		Percentage Reporting
	Male	Female	
Personnel	58	2	69
Sales	1	..	1
Research	1	..	1
Executive	8	2	10
Factory Supervision	8	..	9
Purchasing	1	..	1
Others	7	1	9
Totals	82	5	100

of the company. Moreover, it was interesting to note that 10 executives and 8 factory supervisors provided the recreational leadership in certain specific companies.

Tax-Supported Assistance. No industry in the United States today is unaffected by the increasing problems of leisure. Men and women gainfully employed have shorter hours of labor than those of any previous generation. In every community in the United States this leisure problem is confronting industry as well as the tax-supported agencies. With this in mind it is important to consider the degree to which the tax-supported agencies are offering industries recreational leadership.

TABLE XVI
TAX-SUPPORTED LEADERSHIP

Items	Companies Reporting	Percentage	Some Activities	All Activities
Yes	50	20	47 (94%)	3 (6%)
No	164	67	.....	.....
Not Specified	31	13	.....	.....
Totals	245	100	.....	.....

From the results of this survey, it is apparent that fifty (20%) companies received leadership assistance from tax-supported agencies. Forty-seven (94%) of these companies received recreational assistance in some activities, while three (6%) companies received leadership in all activities.

Leaders' Training. There are many factors to be considered in evaluating the qualifications of a recreational director. Training, experience, and education are some of the more important requisites that should be considered. The following table²⁹ and discussion reveal the training of the 106 industrial leaders studied.

As a result of personal contacts it was noticed that some of the recreational directors were not college trained. These men may have acquired such positions because of their sport interests or abilities. The questionnaire returns also showed that 20 per cent of the companies had non-college trained men in charge of recreation.

²⁹ See page 36.

TABLE XVII
TYPE OF LEADERS' TRAINING

Training	Man	Woman	Percentage
Name Player	2	..	2
Physical Education	23	..	22
Engineering	2	..	2
Business	8	3	9
Personnel	32	3	33
Education	4	3	7
Liberal Arts	2	2	4
Not College Trained	21	..	20
Other Training	1	..	1
Totals	95	11	100

An important result of this survey was the discovery that 33 per cent of the recreational leaders were trained in personnel work while 22 per cent were college trained in physical education.

On the other hand, the existing belief that a large percentage of industrial recreational programs were directed by "name players" was not found to be true in the present survey. (By "name player" is meant a star athlete not specifically trained in recreation.)

Influence of Leadership on the Program. A further analysis of the relationship between the extent of the recreational program and the type of leadership was thought advisable. Such an analysis brought out the following information.

In those companies where the direction of the program was not centralized under a part- or full-time director the average number of activities per company was much less. Further, it may be noted from Table XVIII³⁰ that companies having part- or full-time leadership had a total of 2.87 more activities than those companies without definite leadership.

The above facts indicate that with part- or full-time leadership the total number of recreation activities offered for employees will be increased. This may be due to better-trained leaders or to better administration.

Companies employing a full-time recreation director had twice as many physical sports as companies who had part-time leadership.

³⁰ See page 37.

TABLE XVIII

RELATIONSHIP BETWEEN EXTENT OF PROGRAM AND TYPE OF LEADERSHIP

Type of Activity	Average Number of Activities			
	No Director	Type of Leadership		
		Part-Time	Full-Time	Part or Full-Time
Physical	3.9	4.7	9.7	5.6
Cultural .....	.33	.65	2.7	1.0
Outing	1.0	1.3	2.6	1.6
Social	1.1	1.8	3.2	2.0
Total	6.33	8.45	18.2	9.2

Four times as many cultural activities were participated in by companies with full-time leaders as by companies with part-time leaders. Companies with full-time direction had approximately twice as many outing and social activities as companies with part-time leaders.

The above material is of vital importance to industrial organizations who have or intend to have industrial recreation. Recreation, like any other industrial activity, demands capable leadership in order to be fully efficient. As indicated in Table XVIII, the difference in number of activities between companies with definite leadership and those without it should be ample proof of the need for full- or part-time recreational leadership.

In final consideration of the findings discussed in this chapter, emphasis should be placed on the fact that the promotion and the direction of industrial recreation activities are most important functions connected with employees' service. On the side of management these tasks should be entrusted to men and women of tact, judgment, enthusiasm, and sympathy with the aspirations of working people. Paternalism should be eliminated; so should complete company dictation. Best results may be secured when workmen themselves have the largest possible share in program participation and direction.

CHAPTER V

PROGRAMS

Through the recreational program offered in industrial recreation, groups of employees and employers may meet in friendly contests, become better acquainted, and enjoy a wholesome type of leisure-time activities. Such activities may be physical, cultural, outing, social, or noon-hour in type.

The purpose of an industrial recreational program is to take care of employee leisure and to meet the physical, cultural, and social needs of the various individual groups.

The extent of recreational activities of 245 companies will be discussed in the present chapter. This analysis gives a picture of the range and depth of the present industrial recreation programs.

METHODS OF DISSEMINATING INFORMATION

A successful industrial recreational program is built on the regular patronage of satisfied employees; therefore, the employee should be fully informed of the activity program. Hence, this section applies to various methods of informing employees as to the future program activities.

Bulletin boards were used more frequently than other methods of informing employees as to future program activities. The second most frequently used method of informing the employees of program schedules was the conference. Group meetings were listed as the third outstanding method of informing recreational participants about the activity calendar.

TABLE XIX
METHODS OF DISSEMINATING INFORMATION

Method	Companies Reporting
Bulletin Boards	196
Individual Contact	86
Group Meetings	67
Organization Newspapers	43
Recreational Bulletins	33
Sport Schedule Cards	23
Recreational Magazines	12
Public Address Announcements	6
Others	1
Not Specified	22

PHYSICAL ACTIVITIES

Sports which demand strenuous physical exertion have been classified as Physical Activities. This arbitrary classification naturally eliminates certain other sports from consideration under this discussion. Activities classified under outing, social, and cultural will be discussed in the latter part of this chapter.

An analysis of physical activities should answer the following questions: (1) What sports are most often included in the industrial recreation program? (2) To what extent is interdepartmental and intercompany competition promoted by the various companies? (3) Who generally promotes these activities?

Participation. With regard to the percentage of companies participating in the various physical diversions, it is interesting to determine the percentage of men, women, co-recreational, and family participation. These four classifications of participants were arbitrarily established.

The outstanding physical sports participated in by men, according to company participation were: bowling (87%),³¹ softball (74%), basketball (54%), golf (40%), and baseball (34%). Football and deck tennis were two physical sports with the lowest percentages (1%) of men participants.³²

Thirty-five per cent of the companies provided bowling for women. Thus bowling is a part of the men's and women's program more often than any other activity. Softball was second in importance, being engaged in by women in 11 per cent of the companies having recreational programs. Tennis was participated in by 10 per cent of the companies.

Sports which are played by men and women in mixed groups are classified as co-recreational activities. The outstanding company sports for this group were: bowling (9%), golf (5%), and tennis (5%).³³ These percentages are low, considering the value that recreation leaders place on co-recreational activities.

In composing the questionnaire it was felt that it would be advisable to gather information on the extent of family participation in industrial recreation activities. However, the findings indicate that a small percentage of companies have such activities. Bowling ranks first in family

³¹ Percentages based on the 245 companies having recreational programs.

³² See Table XX, p. 41.

³³ Percentages based on 245.

participation, but only 5 per cent of the companies sponsored this type of participation.

The outstanding physical activities offered by the various companies for men, women, co-recreational, and family participants have been previously noted. Therefore, it is interesting to analyze these activities further in terms of age participation. This, as shown in Table XX,³⁴ reveals the percentage of participation in the various age levels.

Men who engaged in bowling were most frequently (34%) between the ages of 30 and 34. Softball participants (47%) were generally between the ages of 25 and 29. Forty-nine per cent of the men participating in basketball were 20-24 years old. Men who played golf were usually (39%) between the ages of 35 and 39. In the fifth outstanding activity, baseball, the participants were generally between the ages of 25-29 (59%).

Since bowling was the outstanding women's activity, it is important to note that 43 per cent of the participants were between the ages of 20 and 24. Sixty per cent of the women participants in softball were between the ages of 25 and 29 years of age, while 66 per cent of the women engaging in tennis were of the same age.

In a further examination of Table XX, bowling, golf, ping-pong, and rifle and pistol shooting may be observed to be the four physical activities in which all male age groups participated.

Type of Competition. Since competition usually involves team play, it seemed important to determine what physical activities had the greatest number of teams.

The greatest number of teams were reported in bowling. The results show that this sport had as many as 600 teams in a single company. Golf is another physical sport with a large number of teams. The greatest number of teams reported for this sport was 99. Softball, a competitive sport, had 79 teams, while tennis and ping-pong each had 59 teams.

Many industrial recreational participants have a desire to compete against the employees of other companies in various sports. Other employees enjoy interdepartmental competition. The percentage of companies competing in interdepartmental activities and in intercompany activities will be brought out in the following table and discussion.

³⁴ See page 41.

TABLE XX

SPORT PARTICIPATION

Sports	Companies Participating* (Percentage)				Average Participation Age									
					Men (Percentage)					Women (Percentage)				
	Men	Women	Mixed	Family	20	25	30	35	Above 40	20	25	30	35	Above 40
Bowling	87	35	9	5	4	11	34	39	12	20	80	...	...	...
Softball	74	11	1	1	22	47	23	7	1	40	60	...	...	...
Basketball	54	6	1	...	49	44	6	1	...	20	80	...	...	...
Golf	40	5	5	2	4	10	33	39	14	60	20	20	...	...
Baseball	34	1	...	...	21	59	16	4	...	100	...	...	...	...
Tennis	21	10	5	2	10	50	30	10	...	17	66	17	...	...
Ping-Pong	24	9	4	2	9	56	20	3	6	45	45	10	...	...
Horseshoes	24	1	1	...	...	14	31	31	24	...	100	...	...	...
Swimming	9	5	4	2	...	75	...	25	...	...	100	...	...	...
Roller-Skating	7	5	4	2	28	44	28	...	...	40	60	...	...	...
Rifle or Pistol	14	1	1	1	5	17	28	28	22	100	...	...	...	...
Volleyball	12	2	1	1	...	31	46	23	...	...	...	100	...	...
Billiards	10	1	1	2	9	36	36	...	19	100	...	...	...	...
Badminton	7	3	2	1	17	16	50	...	17	...	100	...	...	...
Archery	5	2	1	1	...	34	33	33	...	...	...	...	...	...
Boxing	5	1	1	1	40	60	...	...	...	...	...	...	...	...
Handball	5	...	...	...	...	100	...	...	...	...	...	...	...	...
Soccer	2	1	...	...	...	...	100	...	...	...	...	...	...	...
Wrestling	2	...	...	...	...	100	...	...	...	...	...	...	...	...
Track	2	...	...	...	...	100	...	...	...	...	...	...	...	...
Deck Tennis	1	1	...	...	50	50	...	...	...	50	50	...	...	...
Football	1	...	...	...	50	50	...	...	...	...	...	...	...	...
Others	6	1	...	...	12	22	22	44	...	...	...	...	...	...

* Each participation percentage is based on number of companies having programs (245).

TABLE XXI
ACTIVITY COMPETITION

Sport	Greatest No. of Teams Reported	Type of Competition	
		Percentage Interdepartmental	Percentage Intercompany
Basketball	39	31	69
Bowling	600	62	38
Baseball	39	43	57
Softball	79	50	50
Swimming	9	79	21
Golf	99	73	27
Tennis	59	70	30
Ping-Pong	59	70	30
Billiards	4	89	11
Handball	9	90	10
Boxing	4	36	64
Soccer	4	38	62
Wrestling .....	...	80	20
Football	9	67	33
Track	4	57	43
Volleyball	39	86	14
Archery	4	80	20
Badminton	4	88	12
Deck Tennis	19	75	25
Gymnastics .....	...	83	17
Rifle or Pistol	39	60	40
Horseshoes	39	84	16
Roller Skating .....	...	91	9
Others	9	79	21
Average Percentage ..	...	69	31

It was previously noted that bowling, golf, softball, tennis, and ping-pong were reported as having the greatest number of teams. Since these sports are outstanding, it is interesting to determine whether they were played in interdepartmental or intercompany competition. Bowling was the outstanding physical sport; yet the competition was interdepartmental in 62 per cent of the cases, while only 38 per cent of the companies had intercompany bowling competition. Golf was another activity having a larger percentage of interdepartmental competition (73%) than competition between companies (27%). Softball was the only sport having equal percentages (50%) of participation in both types of competition. Tennis and ping-pong have the same percentage of interdepartmental (70%) and intercompany (30%) competition.

In averaging the percentage of the two types of competition, it is noted that competition in industrial recreation was 69 per cent inter-departmental, while 31 per cent was intercompany in type.

Promotion of Physical Activities. Industrial recreation should be promoted by some group, administrative unit, or agency. Through personal interviews with management, five promotional classifications were established. They were (1) employees, (2) firm, (3) tax-supported agencies, (4) private agencies, and (5) the union.

TABLE XXII
PROMOTION OF PHYSICAL ACTIVITIES

Sport	Promotional Group (Number of Companies)				
	Employees	Firm	Tax-Supported Agencies	Private Agencies	Union
Basketball	57	58	17	20	2
Bowling	159	80	8	6	1
Baseball	47	45	9	5	1
Softball	84	89	25	19	1
Swimming	17	8	3	2	1
Golf	68	41	3	4	..
Tennis	30	16	6	3	..
Ping-Pong	37	20	4	3	..
Billiards	16	7	..	..	..
Handball	7	3	..	2	..
Boxing	7	4	..	..	..
Soccer	4	3	..	..	..
Wrestling	2	4	..	..	..
Football	..	2	1	..	..
Track	3	2	..	1	..
Volleyball	14	13	2	3	..
Archery	8	6	1	..	..
Badminton	10	6	1	..	..
Deck Tennis	1	3	..	..	..
Gymnastics	3	3	..	1	1
Rifle or Pistol	26	10	..	..	..
Horseshoes	42	22	2	2	..
Roller-Skating	19	4	..	..	..
Others	10	6	..	..	..
Percentage of Totals	52	35	6	6	1

From these data obtained from the questionnaires, it was evident that 52 per cent of industrial recreation of a physical type was promoted by the employees. The firm promoted physical activities in 35 per cent of the cases. Tax-supported and private agencies each promoted these activities in 6 per cent of the industries studied. Unions promoted physical activities in only a few companies (1%).

Bowling was the outstanding physical activity promoted by the employees. Softball ranked second, 84 companies having the sport employee-promoted. The results further show that industrial firms promoted softball and bowling more than any other physical activity. Activities promoted by tax-supported and private agencies were basketball and softball. In two companies the union promoted basketball.

CULTURAL ACTIVITIES

Activities listed under this classification are associated with hobbies. They are usually concerned with individual or small group interests. They provide an important outlet for creative expressions and therefore are a necessary adjunct to the industrial recreation program. With this viewpoint in mind the following analysis of these activities is most interesting.

Participation. Camera clubs ranked first in importance. Twelve per cent of the companies provided such clubs for men, and seven per cent for women. Six per cent of the companies also had camera clubs for mixed groups.

It was interesting to note that singing groups were sponsored for men by 13 per cent of the companies, while 5 per cent of the companies provided this activity for women. Orchestral groups for men were also considered a part of the recreation program in 9 per cent of the companies.

All activities classified in this group were sponsored by some companies to a certain extent. Nevertheless, this important area of recreation has not seemingly been emphasized to the degree the accrued values might indicate.

The highest percentages of participants in cultural activities were between 35 and 39 years of age. Men of this age were interested in library club and science club activities, while women who were 35-39 years old engaged in gardening and science club activities. Gardening was the outstanding activity for all participants above 40 years of age.

Men who were between 20 and 29 years of age more frequently engaged in debating, while women of this age participated in camera

TABLE XXIII
PARTICIPATION IN CULTURAL ACTIVITIES

Activity	Companies Participating* (Percentage)				Average Participation Age									
	Men	Women	Mixed	Family	Men (Percentage)					Women (Percentage)				
					20	25	30	35	Above 40	20	25	30	35	Above 40
Camera Club	12	7	6	2	...	33	33	17	17	40	...	60	...	...
Singing	13	5	2	1	12	12	29	35	12	38	25	25	12	...
Music	9	4	1	2	9	45	19	27	...	34	33	33	...	...
Dramatics	7	5	2	1	25	25	...	50	...	34	33	33	...	...
Gardening	6	3	1	3	...	...	...	...	100	...	...	...	50	50
Stamp Club	3	2	1	1	50	50	...	...	...	...	100	...	...	...
Library Club	2	2	1	1	...	...	...	100	...	...	...	100	...	...
Debate Club	2	2	1	1	100	...	...	...	...	...	100	...	...	...
Science Club	2	1	1	1	...	...	...	100	...	...	...	...	100	...
Others	5	2	2	1	...	...	...	...	...	...	...	...	...	...

* Each participation percentage is based on 245 companies.

club activities. Stamp club and music activities were most popular among men who were between 25 and 29 years old. Women in this same age level engaged in debating and stamp club activities. Library club activities were participated in by women between the ages of 30 and 34, while men of this age indicated their preference for dramatics over other cultural activities.

Promotion of Cultural Activities. The employees promoted 62 per cent of all cultural activities, while the firm sponsored 33 per cent. Tax-supported and private agencies, as well as unions, collectively promoted 5 per cent of the cultural activities.

TABLE XXIV
PROMOTION OF CULTURAL ACTIVITIES

Activity	Promotional Group (Number of Companies)				
	Employees	Firm	Tax-Supported Agencies	Private Agencies	Union
Gardening	11	5	1	..	..
Music	17	8	..	..	..
Singing	21	13	1	2	1
Dramatics	13	7	..	..	1
Library Club	4	1	..	..	..
Camera Club	25	12	1	..	..
Debate Club	3	1	..	..	..
Stamp Club	5	2	..	..	..
Science Club	4	2	..	..	..
Others	7	8	..	..	1
Percentage of Totals	62	33	2	1	2

Singing and camera club activities were most often promoted by the employees or the firm.

OUT-OF-DOOR ACTIVITIES

Another group of recreational activities was classified as out-of-door or outing activities. Such activities, in the main, do not demand special building facilities. These activities may also be engaged in individually or in groups. Further, they are well suited to week-end and vacation participation. An analysis of these recreations presents the extent to which industries are promoting away-from-the-plant activities.

TABLE XXV
PARTICIPATION IN OUT-OF-DOOR ACTIVITIES

Activity	Companies Participating* (Percentage)				Average Participation Age									
	Men	Women	Mixed	Family	Men (Percentage)					Women (Percentage)				
					20	25	30	35	Above 40	20	25	30	35	Above 40
Picnics	31	21	19	25	11	8	4	38	39	29	29	21	13	9
Fishing	18	6	2	2	...	5	40	30	25	33	33	34	...	...
Hunting	13	2	1	1	...	15	23	32	30	...	...	...	...	...
Skeet Shooting	12	2	1	2	...	23	31	31	15	...	...	...	100	...
Skating	11	7	4	2	...	60	30	10	...	63	37	...	...	...
Riding	5	7	3	1	...	100	...	...	...	75	25	...	...	...
Skiing	5	3	2	1	...	67	...	33	...	100	...	...	...	...
Camping	4	2	1	1	50	25	...	25	...	...	25	50	25	...
Tobogganing	2	1	1	1	20	60	20	...	...	80	20	...	...	...
Snowshoeing	1	...	...	...	...	...	...	...	...	...	...	...	...	...
Nature Trips	1	1	...	1	...	...	...	...	...	...	...	...	...	...
Others	5	1	1	1	...	100	...	...	...	...	...	...	...	...

* Each participation percentage is based on 245 companies.

Participation. In consideration of the percentage of companies participating in outing activities according to men, women, co-recreational, and family participants, it is interesting to note from Table XXV,³⁵ the small percentages of companies promoting these activities. Although there were very few companies sponsoring outing activities, picnics were promoted by 100 per cent of the companies. With regard to this outstanding industrial recreational activity, it was evident that companies have men, women, co-recreational groups, and family participants engaging to a higher percentage in picnics than in any other recreational activity. Fishing should also be mentioned as a frequently engaged in outing activity, since men in 18 per cent of the companies having recreation participated in this sport.

Although the age of men participants in out-of-door activities was usually between 25 and 35, picnics were attended more frequently by men (77%) who were *over* 35 years of age. Fishing was the outstanding activity of men between the ages of 25 and 35.

The average participation age of women in out-of-door activities was usually between 20 and 30 years of age. It was in this age level that 79 per cent of the women picnickers were included. The women

TABLE XXVI
PROMOTION OF OUT-OF-DOOR ACTIVITIES

Activity	Promotional Group (Number of Companies)		
	Employees	Firm	Tax-Supported Agencies
Riding	21	1	..
Skating	25	3	2
Skiing	10	1	2
Tobogganing	6	..	1
Snowshoeing	2	..	..
Fishing	37	4	3
Hunting	27	1	2
Skeet Shooting	23	6	2
Picnics	62	67	..
Camping	8	3	1
Nature Trips	2	1	..
Others	8	1	2
Percentage of Totals	69	27	4

³⁵ See page 47.

who engaged in fishing were between 20 and 30 years of age. Other outing activities participated in by women of this age level were: riding, skating, and skiing.

Promotion of Out-of-Door Activities. The promotional group for out-of-door activities was, in 69 per cent of the cases, the employees. Next in order was the firm, which ranked second (27%). Private agencies and unions, however, did not offer any assistance in these activities, though tax-supported agencies promoted for industry 4 per cent of the outing activities.

Picnics were sponsored by the firm (67%) more often than by the employees (62%), but fishing was the outstanding activity promoted by tax-supported agencies.

SOCIAL ACTIVITIES

Activities which allow participants to meet on a common ground, to intermingle, and to create a friendly feeling may be called social recreational activities. Activities of this nature require personal contact of one employee with another; in this manner, a friendly feeling among the industrial personnel may be created.

Participation. It is significant that every activity mentioned in Table XXVII³⁶ had some degree of participation. Dances were the outstanding company-promoted activity for men, with banquets ranking second. Dances were also the outstanding social activity sponsored by the company for women and other groups.

Significant also is the fact that the participation ages of men and women in social activities varied according to the activity. Men between the ages of 20 and 29 did very little in social activities, while women of this same age participated to a higher degree than at any other age.

Smokers, dances, and social parties were the outstanding activities engaged in by women of 20-29 years of age. Men who were above 35 years old participated in activities like bingo, card parties, and smokers. Women above 35 years of age preferred bingo and card parties.

The assumption may be advanced that social activities should seriously be considered as an important part of an industrial recreational program, since the findings showed that they were enjoyed by all ages, and also participated in by all groups.

³⁶ See page 50.

TABLE XXVII
PARTICIPATION IN SOCIAL RECREATION

Activity	Companies Participating*				Average Participation Age											
	(Percentage)				Men (Percentage)					Women (Percentage)						
	Men	Women	Mixed	Family	20	25	30	35	Above		20	25	30	35	Above	
									40	40					40	
Dances	27	22	20	13	...	31	35	12	22	43	31	20	3	3	3	3
Card Parties	24	16	14	7	...	...	25	32	43	27	13	33	13	14	14	14
Smokers	16	5	2	1	...	...	25	31	44	...	100	...	...	...	...	...
Social Parties	23	20	13	10	5	...	35	30	30	59	5	18	18	...	...	...
Banquets	25	5	8	2	...	5	21	47	27	50	8	17	25	...	...	...
Bingo Parties	6	4	5	4	...	...	20	60	20	...	...	...	67	33	33	33
Others	4	3	2	2	...	25	50	...	25	...	50	50	...	...	...	...

* Each participation percentage is based on 245 companies.

Promotion of Social Activities. In 68 per cent of the companies having recreational programs the employees promoted the social activities, while 27 per cent of the social events were promoted by the firm. The outstanding activities that were promoted by these groups were: (by the employees) dances, card parties, and social parties; (by the firm) banquets and social parties.

TABLE XXVIII
PROMOTION OF SOCIAL ACTIVITIES

Activity	Promotional Group (Number of Companies)				
	Employees	Firm	Tax-Supported Agencies	Private Agencies	Union
Dancing	73	21	4	1	5
Card Parties	59	13	1	1	..
Smokers	29	12	1	..	2
Social Parties ...	55	23	1	1	2
Banquets	39	35	..	..	1
Bingo Parties ...	16	2	..	..	1
Others	8	5	..	..	..
Percentage of Totals	68	27	2	1	2

Tax-supported agencies and unions promoted only 2 per cent of the social activities, while private agencies promoted only 1 per cent. Dancing was the outstanding activity sponsored by these three agencies.

LUNCH PERIOD ACTIVITIES

Lunch period activities have to be conducted at the place of employment because of the length of the noon period. Therefore, activities which require few facilities have to be used.³⁷ Very often a driveway, an adjacent lot, or a parking space may be used, where employees may participate in volleyball, horseshoes, softball, etc. Cafeterias and rest rooms may be utilized during inclement weather for cards, checkers, musical programs, ping pong, etc. If the company has bowling alleys in the building, interdepartmental tournaments may be played off during the lunch period.

The activities that were most popular during lunch periods are, in the order of their importance: cards, horseshoes, checkers, softball,

³⁷ See Chapter VI, page 53.

musical programs, ping pong, and bowling. Thus, both outdoor and indoor facilities were in demand for lunch period recreation.

TABLE XXIX
LUNCH PERIOD ACTIVITIES

Activity	Companies Reporting
Cards (all types)	106
Horseshoes	81
Checkers	55
Softball	54
Listening to Music	52
Ping Pong	48
Bowling	26
Chess	17
Billiards	15
Shuffleboard	10
Volleyball	5
Others	43

It is interesting to note that in one of the large companies visited there were 600 horseshoe teams competing during lunch periods. The recreational director of this company believed that noon-hour recreational activities were a good outlet for energies that might lead to subversive activities.

CHAPTER VI

FACILITIES AND EQUIPMENT

Three factors are paramount in establishing industrial recreation activities. They are (1) leadership, (2) program of activities, and (3) facilities and equipment. Each factor is so closely interrelated that a lowered quality of one affects the quality of the other two. A case in point is an organization having good leadership but poor facilities and equipment. Such a situation affects the breadth of the program of activities, and may in turn affect the leaders' attitude toward the whole organization.

In the previous chapters the problems associated with leadership and program have been explored. The following discussion is concerned with the policies governing the use of facilities and equipment. Such policies should be critically reviewed in light of the success of the entire recreational program in industry.

FACILITIES

The success of an industrial recreation program depends in a large measure upon the facilities available. Since facilities include baseball fields, bowling alleys, gymnasiums, and the like, there are many agencies which may provide them.

The company is one organization that may provide recreational facilities. The outstanding facilities provided by the company were baseball fields, softball fields, tennis courts, and billiard facilities. Since the latter is the only indoor sport of the four mentioned, it appears that ordinarily the companies did not tend to provide special facilities for indoor sports.

The commercial agency is another establishment which may provide recreational facilities. (By commercial agency is meant an organization which profits from recreational activities.) Bowling alleys and golf courses seem to have been the outstanding commercial facilities used by the industrial personnel.

A third organization which provides recreational facilities for industrial employees is the privately-supported agency. These agencies include the Y. M. C. A., Y. W. C. A., and similar organizations. Of the facilities provided by this group, basketball floors and bowling alleys were the ones used most often by industrial companies. Thus it seems clear that privately-owned recreational agencies are of great value in promoting industrial recreational programs.

A fourth organization which may provide recreational facilities is the tax-supported agency; included in this classification are the city

TABLE XXX
FACILITY PROVISIONS

Facilities	Owned by Company	Commercial Agency*	Privately Supported*	Tax- Supported*
Basketball Floors	17	6	34	86
Baseball Fields	37	5	12	82
Billiard Establishments	22	9	4	7
Softball Fields	53	10	14	110
Bowling Alleys	16	151	26	6
Swimming Pools	10	10	8	21
Tennis Courts	20	11	10	25
Gymnasiums	12	6	10	18
Golf Courses	7	59	24	20
Handball Courts	7	6	9	8
Others	11	1	1	1

* Number of companies using specific agencies for their program.

parks, the national parks and municipal centers. Softball fields were the outstanding tax-supported facilities used by the company's recreational participants. It is interesting to note that tax-supported baseball areas were used more often than all other baseball facilities.

It is very evident from the preceding discussion that out-of-door facilities for soft- and hard-ball are outstanding company-owned areas. It might be inferred from these data that infrequently does management or a company organization provide an industrial recreation center. Such a center would allow facilities for many of the physical, cultural, and social indoor activities which are needed to expand the present program.

EQUIPMENT

Personal. With regard to the furnishing of personal equipment, certain provisional policies exist in industrial recreation. For a representative team, the company usually purchases the uniforms. If the company does not provide personal equipment for team uniforms, either the individual employee or the employees' association usually attends to the necessary costs. The trade union at the present time very seldom purchases the team's uniforms.

Many industries are represented in physical sports by representative teams. The findings indicate the following trend in various sports.

Softball is a competitive sport which attracts many spectators. The possibilities for advertising and creating company morale may account

TABLE XXXI
PROVISIONS FOR PERSONAL EQUIPMENT

Type of Uniforms	Purchased By			
	Company	Individual Employee	Employees' Association	Trade Union
Softball	112	26	52	..
Baseball	80	16	41	5
Basketball	78	23	39	1
Bowling	77	98	37	1
Football	3	1	3	..
Track	3	1	4	..
Others	7	2	2	..

for the fact that 46 per cent of the companies studied provided uniforms for use in softball games. When the company did not finance the purchase of softball uniforms, the company employees' association generally took care of the expenses incurred.

Very seldom are baseball uniforms provided by the individual employee. The ratio of those providing uniforms was two to one in favor of the company over the employees' association.

Basketball is a great sport requiring comparatively little expense for uniforms. Where they were provided, the company usually financed them. In 78 (32%) companies out of a total of 245, the company provided the basketball uniforms. From case studies made it was evident that basketball was, in many instances, one of the activities participated in for advertising purposes.

Bowling was the only activity for which the individual player purchased the uniforms to a greater extent than did the company or the employees' association. Bowling may have been so popular that the company or employees' association could not afford to provide uniforms for such a large number of participants.

Game. In the appraisal of a complete program of industrial recreation, consideration must be given to the game-equipment needs. For discussion of this phase of recreation it is important to define game-equipment: this includes the articles necessary in carrying out the activity, such as baseballs, bats, parallel bars, and the like.

The popularity of sports determines in part whether the company, the employee, or the employees' association provides funds for the necessary game equipment. Softball, basketball, and baseball were the activi-

ties for which the game equipment was most often provided by the company. The individual employee or the employees' association most frequently purchased softball, basketball, and baseball game equipment.

TABLE XXXII
COVERAGE FOR GAME EQUIPMENT

Equipment	Company	Employee or Employees' Association	Trade Union
Softball	94	64	..
Basketball	57	58	..
Baseball	55	37	..
Gymnastic	14	7	..
Billiards	11	15	..
Football	4	5	..
Others	18	8	2

CHAPTER VII

STATED VALUES OF RECREATIONAL ACTIVITIES

Proper administration, adequate program, and sufficient facilities and equipment are essential for a successful recreation program in industry. Nevertheless, the effect of the administration, the program, and the facilities is lost unless the individual employee obtains qualitative returns from the activities. In order to determine these qualitative factors, opinions were solicited from industrial leaders. The following discussions present their stated values of the recreational activities.

POPULAR ACTIVITIES

Many recreational programs are offering for the industrial employee a wide range of activities. Are all these activities similar in popularity? The following discussion presents the opinions of the leaders surveyed.

Considering the four classifications of activities as a group, it is noted that they were ranked in popularity as follows: (1) bowling, (2) softball, (3) basketball, (4) picnics, (5) dancing and golf, (6) baseball, (7) card parties, and (8) social parties and banquets. The first three most popular activities were physical; the fourth was an out-of-door activity; while the remaining were either physical or social.

Such findings indicate that physical activities are thought to be the most popular. This point of view may be due to an overemphasis on this type of activity and an underemphasis on activities requiring either a lower degree of skill or different types of skill. Such activities are found listed under the headings of Social, Cultural, and Outing Activities.

FELLOWSHIP ACTIVITIES

Since 79 per cent of the industrial recreational leaders stated that they believed that recreation improved employee-employer relations,³⁸ it was interesting to determine what activities were responsible for bringing about this feeling.

According to returns received, bowling was cited as the activity promoting the best fellowship between the employee and the employer. Other activities that were considered by leaders as promoters of fellowship were, in the order of their importance: softball, basketball, baseball, and golf.

³⁸ See page 62.

TABLE XXXIII
PERCENTAGE RANK OF FIVE MOST POPULAR ACTIVITIES SELECTED BY
RECREATIONAL LEADERS

Physical	Per- cent- age*	Cultural	Per- cent- age	Outing	Per- cent- age	Social	Per- cent- age
Bowling	83	Camera Club	12	Picnics	43	Dancing	36
Softball	71	Singing	12	Fishing	18	Card Parties	28
Basketball	47	Music (Orch.)	9	Hunting	12	Social Parties	27
Golf	36	Dramatics	7	Skating	11	Banquets	27
Baseball	31	Gardening	6	Skeet Shooting	10	Smokers	16

* Each percentage based on 245 company replies.

TABLE XXXIV
FELLOWSHIP ACTIVITIES

Activities	Number of Companies Reporting
Bowling	145
Softball	87
Basketball	38
Baseball	36
Golf	33
Ping Pong	10
Picnics	9
Interdepartmental Activities	8
Parties	7
Dances	5
Intercompany Activities	2
Others	31

The activities which brought employers and employees together on a friendly basis may be observed from Table XXXIV to be mainly physical in nature. Further analysis of this table indicates that the five outstanding fellowship activities were the same as the outstanding activities of Table XX.³⁹ The remaining activities which leaders considered as good fellowship activities were the outstanding activities listed in Tables XXV⁴⁰ and XXVIII.⁴¹

PARTICIPATION DURING PRODUCTION DIFFICULTIES

The establishment of recreational programs in industry can not be justified on the basis of decreasing labor turnover. Nevertheless, a worker is hired for both his physical and mental work, and it pays to keep a man in fit condition at all times. Therefore, it is important to go further than the problems of everyday industrial recreation and determine whether companies regard it as important to keep employees in fit condition during labor difficulties and factory shutdowns.

Twenty per cent of the companies stated that they had not experienced any labor difficulties. By contrast, there were 27 per cent of the companies which had had such trouble; 18 per cent of these continued their recreational programs during labor difficulties, and 9 per cent did not. The assumption might be made from the above percentages that

³⁹ See page 41.

⁴⁰ See page 47.

⁴¹ See page 51.

management considers recreation important enough to be carried on during labor difficulties.

During factory shutdowns 33 per cent of the companies continued their recreational program. This is a very high percentage, since only 8 per cent of the companies discontinued their activities.

TABLE XXXV
RECREATIONAL PARTICIPATION DURING PRODUCTION DIFFICULTIES

Situation	Program Continued		Program Discontinued		No Difficulties		Question Not Answered		Totals	
	No. Companies	Percentage	No. Companies	Percentage	No. Companies	Percentage	No. Companies	Percentage	No. Companies	Percentage
During Labor Difficulties	43	18	23	9	50	20	129	53	245	100
During Factory Shutdowns	82	33	19	8	50	20	94	39	245	100

Although only a small percentage of companies did not provide recreation during production difficulties, it should be emphasized that enforced leisure may easily prove an industrial curse, unless employees have an opportunity to recreate during seasonal layoffs.

EVALUATION OF PRESENT PROGRAM

It was significant that 56 per cent of the recreational leaders indicated that they considered their program inadequate. There were, however, 90 (37%) leaders who believed their program adequate.

TABLE XXXVI
ADEQUACY OF PRESENT RECREATIONAL PROGRAM

Reply	Companies Reporting	Percentage
Yes	90	37
No	136	56
Not Specified	19	7
Total	245	100

One outstanding indication of the percentages shown in Table XXXVI is that industrial recreational leaders are aware of the need for program improvement.

Stated Causes for Program Inadequacy. Since 56 per cent of the recreational leaders stated that their programs were inadequate, it seemed advisable to determine the reasons for this condition.

It was indicated in Chapter VI⁴² that there is a definite need for company recreational facilities and equipment. Sixty-nine recreational leaders listed this lack of facilities and equipment as the outstanding cause for inadequate programs. Further investigation shows that noon-hour activity was limited by the same difficulties.⁴³

The second ranking cause for inadequate programs was that employees lived too far from their place of work. Many of the employees have to travel for an hour or more in order to arrive home; therefore, a noon-hour program is the only logical type of recreation that may be carried on for this type of employee. Other leading causes for poor programs were given as follows: lack of diversified recreational program, insufficient number of employees, and lack of good leadership.

TABLE XXXVII
STATED CAUSES FOR PROGRAM INADEQUACY

Causes	Number of Companies Reporting
Lack of Company Facilities and Equipment	69
Employees Living Too Far From Plant	60
Lack of Diversified Recreational Program	34
Insufficient Number of Employees	33
Lack of Good Leadership	31
Lack of Community Facilities and Equipment	28
Lack of Finances	23
Lack of Commercial Facilities and Equipment	9
Attitude of Labor Organizations	9
Management Doesn't Believe in Recreation	4
Departmental Differences	3
Others	17

VALUES INHERENT IN INDUSTRIAL RECREATION

Improved Employee-Employer Relations. "Through the program offered in industrial recreation, groups of employers and employees meet in friendly contests, become better acquainted and enjoy a wholesome

⁴² See page 53.

⁴³ See page 51.

TABLE XXXVIII

IMPROVEMENT OF EMPLOYEE-EMPLOYER RELATIONSHIPS THROUGH RECREATION

Check List	Number Companies	Percentage
Yes	194	79
No	9	4
Not Specified	42	17
Totals	245	100

type of recreation."⁴⁴ The validity of this statement may be determined from the results discussed below.

In analyzing the returns obtained from 245 companies; it is evident that 79 per cent of the industrial leaders believed that the recreational program established between employer and employee a friendly feeling which otherwise might not have been present. In contrast, it may be noted that 4 per cent of the company recreational directors believed that recreation did not improve employer-employee relationships. The above percentages substantiate the generally accepted belief that recreational activities improve company relationships between employer and employee.

Important Stated Values of Industrial Recreational Programs. Observations have already been made concerning the values obtained from industrial recreation.⁴⁵ The statements in Table XXXIX⁴⁶ and in the discussion following point out the outstanding values listed by recreational leaders.

It may be noted from published material⁴⁷ concerning industrial relations that co-operation between employee and employer is essential in obtaining optimum productivity. This material indicates various methods of improving employee-employer relationships, of which recreation is one. In the present survey, there were 99 of the 245 who believed that industrial recreation improved such relations.

The experience of management proves that what a man does in his off-work hours determines largely his efficiency on the job the next day. Laborers, as well as foremen, need an opportunity for the right

⁴⁴ *Industrial Recreation in Oakland*; Oakland, California, Recreation Department.

⁴⁵ See Chapter II, page 9.

⁴⁶ See page 63.

⁴⁷ *The Conference Board Management Research Division*; National Industrial Conference Board, Inc., 247 Park Avenue, New York.

kind of relaxation and exercise to keep them in a co-operative mood and physically fit. Recreation for laborers and foremen should mean industrial assets in terms of health, efficiency, and industrial morale. The above factors were considered second in importance. Ninety-three recreational directors indicated this point of view under the following grouping of values: "Better interdepartmental co-operation and fellowship."

TABLE XXXIX
VALUES INHERENT IN INDUSTRIAL RECREATION

Values	Number of Companies Stating Values
Improvement of <i>employer-employee</i> relations, good will.....	99
Better <i>interdepartmental</i> co-operation and fellowship.....	93
Better use of energy during free time.....	39
Development of physical fitness.....	34
Creation of good mental conditions and morale (personnel psychology)	33
Better understanding by management of employees' problems.....	26
Development of leadership and sportsmanship in the employees...	21
Building of company morale (loyalty, pride, satisfaction, co-operativeness)	20
Development of a community spirit favoring the company.....	17
Opportunity for management to notice characteristics useful in selecting men for advancement.....	11

"This civilization is not going to depend so much on what we do when we work as what we do in our time off."⁴⁸ A more concrete statement of this generalization might be expressed in this way: If a man has an extra hour or two of rest thrust upon him, and doesn't know what to do with it, he may drink, gamble, go to cheap shows, overeat, quarrel with his wife, or squander his money and time in other profitless ways. All of this leads to the conclusion that the problem of recreation and of the wise use of leisure is almost as important as one's work. Therefore, consideration should be given to constructive recreation as a leisure-time activity. Thirty-nine recreational directors regarded "better use of energy" as a value which may be obtained from recreation.

⁴⁸ E. T. Lies, *The Leisure of a People*; Indianapolis, Indiana, the Report of a Recreation Survey in Indianapolis.

A successful recreational plan is one which tends to improve the mental and physical well-being of employees. It should do this without making more demands on an employee's time than he desires to give. Well-planned recreation should develop a camaraderie which will help to break down the sometimes strained formality of business contacts. Teamwork on the field should develop teamwork in the organization.

A company recreation program may secure the good will of the community at large; this may be accomplished by favorable newspaper publicity concerning the recreation program. Public officer's opinions will be in favor of the company's having wholesome recreation. Public opinion likewise will favor the company's offering recreational activities for the employees of the community.

In summarizing this phase of ~~industrial~~ recreation, it may be stated that management believes that recreation for the worker and for the employer is conducive to understanding and good fellowship. Such recreation helps to create joy and happiness and is a good medium for establishing a better *esprit de corps* among the various branches of industrial work. ^{mobile}

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APPENDIX

PURDUE UNIVERSITY INDUSTRIAL RECREATION SECTION LAFAYETTE, INDIANA

Dear Sir:

The increase of leisure time in industry, through the reduction in hours of work, has given management the problem of industrial recreation. The numerous demands from industry for recreational information and for assistance, requested at recreational conferences, indicate that managements of industrial concerns are seeking reliable information on how various companies are carrying on their recreational activities.

At present, adequate information is not available, but will be if you and the other companies to which the enclosed check list is being sent will provide us with the data requested. In return we will provide you with a summary of the results. Thus a standard for the evaluation of an old, or the establishment of a new, industrial recreational program will be possible.

The information given will be considered strictly confidential, and the results will be presented in such a way that individual company identity will be impossible.

Through a grant established under the Purdue Research Foundation, funds have been made available for this national study of industrial recreation, co-operatively directed by the Personnel Service of the Schools of Engineering and Science, and the Division of Physical Education for Men.

Your co-operation will be greatly appreciated.

Sincerely yours,

NATIONAL INDUSTRIAL RECREATION SURVEY

Directed by

THE PURDUE RESEARCH FOUNDATION
 Through the Personnel Service
 The Schools of Engineering and Science
 The Division of Physical Education for Men

INSTRUCTIONS: Please check and return questionnaire in self-addressed envelope to Purdue University. Please answer this questionnaire, as it refers to the program of Industrial Recreation in your specific branch or unit of the company.

I. COMPANY _____ TYPE _____
 (e.g. Electrical, Automotive, Glass, etc.)

ADDRESS _____
 Street City State

PERSON GIVING
 INFORMATION _____
 Name Title

II. Number of employees Male Female
 Factory workers
 Office workers
 Executives
 TOTAL EMPLOYEES

III. Do your employees have a recreational program? Yes No
 Do you sponsor it? (Financially)
 Do you direct it? (Leadership)
 Or, do your employees control it?

IV. Describe the present form of administration of the recreational program. (Check the description which most nearly corresponds to your set-up.)

Administered by:

Director of recreation
 Personnel officer
 Company officer
 Appointed committee of employees
 Group of volunteer employees
 Trade union
 Committee of both employers and employees
 Privately-supported agency (Y. M. C. A., etc.)
 Tax-supported agency (city, school, park, etc.)
 Others (specify)

- V. Do you require a special medical examination for those participating in strenuous sport activities? (Basketball, boxing, etc.) Yes..... No.....
- VI. Are your employees protected by insurance when they are participating in recreational activities? Yes..... No.....
- VII. Check the method you use to keep the employees informed of the recreational activities offered in your organization.
- Bulletin boards
 - Recreational bulletins
 - Sport schedule cards
 - Organization newspapers
 - Recreational magazines
 - Person to person contact:
 - Group meetings
 - Individual contact
 - Public address system announcements
 - Others (specify)
- VIII. How is your recreational program financed? (Indicate percentage.)
- | | | | | | | | | | |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
- Bonds underwritten*
 - Company
 - Company benefit association
 - Concessions
 - Union
 - Paid admissions
 - Entry fee
 - Others (specify)
- IX. What is your estimated average yearly expenditure for recreation?
- Land acquisition
 - Improvement of recreational facilities
 - Equipment
 - Erection and equipment of recreational building
 - Maintenance
 - Recreational leaders' salaries

PERSONNEL

- X. Does your company EMPLOY a recreational director?
- Yes..... No.....
- Man..... Part-time..... Full-time.....
- Woman..... Part-time..... Full-time.....

* Bonds bought by management, retired by recreational earnings.

XI. If the director is part-time, check department in which director works.

Man Woman

Advertising
Personnel
Sales
Research
Executive
Factory supervision
Others (specify)

XII. Does your company receive DIRECTIONAL ASSISTANCE from a tax-supported agency (city, school, or park recreational department)?

Yes No
Some activities
All activities

XIII. Regardless of your present set-up, to whom do you think a separate director should be responsible:

Personnel manager
Advertising manager
Vice-president
Research executive
Sales executive
Others (specify)

XIV. To evaluate the training of your recreational director, please check his or her qualifications:

Man Woman

"Name player" (ex-big league ball player, etc.)

College-trained in:

Physical education and recreation
Engineering
Business
Personnel
Education
Liberal arts
Other (specify)
Not college-trained
Other training (specify)

XV. Do your employees continue their recreational participation during:

Labor difficulties Yes No
Factory shutdowns Yes No

XVI. Has your recreational program established a friendly feeling between employer and employee, which otherwise might not be present?

Yes No

PROGRAM

XVII. The following is a list of PHYSICAL recreational activities. In the appropriate columns check whether men, women, men and women together, or the families participate in each of these sports. Give the average age of men participants and women participants. Also, what type of competition each sport represents. Please check carefully what agency sponsors the particular activity.

SPORTS	WHO PARTICIPATES							TYPE OF COMPETITION				SPONSORED BY					
	Male	Ave. Age Male	Female	Ave. Age Female	Mixed	Family	No. of Teams	Inter-Dep't-mental	Be-tween Co's.	Em-ployees	Firm	Community Recreation Agencies	Y. M. C. A.	Y. W. C. A.	C. Y. O.	Y. M. H. A.	Union
Basketball																	
Bowling																	
Baseball																	
Softball																	
Swimming																	
Golf																	
Tennis																	
Ping-Pong																	
Billiards																	
Handball																	
Boxing																	
Soccer																	
Wrestling																	
Football																	
Track																	
Boating																	
Volleyball																	
Archery																	
Badminton																	
Deck Tennis																	
Gymnastics																	
Rifle—Pistol																	
Horseshoes																	
Roller-Skating																	
Field Meets																	
Others (specify)																	

XVIII. In your opinion what five PHYSICAL recreational activities are most popular in your program?

- a.
- b.
- c.
- d.
- e.

XIX. The following is a list of CULTURAL recreational activities. (Please fill in the chart as you did the PHYSICAL activities chart.)

[illegible]

XX. In your opinion what five CULTURAL recreational activities are most popular in your program?

-
-
-
-
-

XXI. The following is a list of OUT-OF-DOOR recreational activities.
(Please fill in chart like PHYSICAL and CULTURAL charts.)

[illegible]

XXII. In your opinion what five OUTING recreational activities are most popular in your program?

- a.
- b.
- c.
- d.
- e.

XXIII. The following is a list of SOCIAL recreational activities. (Please fill in chart in same manner as PHYSICAL, CULTURAL and OUT-ING charts.)

SOCIAL ACTIVITIES	WHO PARTICIPATES							SPONSORED BY				
	Male	Ave. Age Male	Female	Ave. Age Female	Mixed	Family		Em- ployees	Firm	Community Recreation Agencies	Y. M. C. A. Y. W. C. A. C. Y. O. Y. M. H. A.	Union
Dancing												
Card parties												
Smokers												
Social parties												
Teas												
Banquets												
Bingo parties												
Others (specify)												

XXIV. In your opinion what five SOCIAL recreational activities are most popular in your program?

- a.
- b.
- c.
- d.
- e.

XXV. Please list the five activities in your recreational program which provide the best revenue.

- 1.
- 2.
- 3.
- 4.
- 5.

XXVI. Please check those activities which your employees participate in during their lunch periods.

Bowling
 Chess
 Softball
 Checkers
 Shuffleboard
 Billiards
 Horseshoes
 Volley ball
 Handball
 Basket shooting
 Cards (all types)
 Ping Pong
 Badminton
 Movies
 Listening to music
 Music participation
 Others (specify)

XXVII. Please check who pays for the following EQUIPMENT:

EQUIPMENT	COMPANY	INDIVIDUAL EMPLOYEE	EMPLOYEES' ASSOCIATION	TRADE UNION
UNIFORMS				
Baseball				
Bowling				
Softball				
Football				
Basketball				
Track				
Others (specify)				
Gymnastic Equipment				
Baseball Equipment				
Billiards Equipment				
Basketball Equipment				
Football Equipment				
Softball Equipment				
Others (specify)				

XXVIII. Who provides the following FACILITIES?

FACILITIES	COMPANY		COMMERCIAL AGENCY	PRIVATELY SUPPORTED AGENCY*	TAX SUPPORTED AGENCY†
	Owned	Leased			
Basketball floors					
Baseball fields					
Billiard establishments					
Softball fields					
Bowling alleys					
Swimming pools					
Tennis courts					
Gymnasiums					
Golf courses					
Handball courts					
Others (specify)					

* Including Y.M.C.A., etc.

† City, school, park, etc.

XXIX. Do you consider your recreational program adequate? In other words, is it comprehensive, and used by the majority of your employees?
Yes. No.

XXX. If the above answer is NEGATIVE, please check here what, in your opinion, is the cause.

CAUSES:

- Departmental differences
- Attitude of labor organizations
- Employees living too far from plant
- Lack of company facilities and equipment
- Lack of community facilities and equipment
- Lack of commercial facilities and equipment
- Lack of good leadership
- Insufficient number of employees
- Lack of diversified recreational program
- Lack of finances
- Management doesn't believe in recreation
- Others (specify)

XXXI. In your opinion, what TEAM COMPETITION permits the greatest intermingling and good fellowship between employer and employee? Please list three, in the order of their superiority.

- 1.
- 2.
- 3.

XXXII. What in your opinion are the values obtained from your recreational activities?

XXXIII. Will you kindly enclose, under separate cover, pamphlets, booklets, reports, and the like, which you believe would be helpful in the final written presentation of this survey?

